



BEYOND THE MEGAWATT

OPTIMIZING IMPACT OF CLEAN ENERGY PROCUREMENT:
Growing Demand for Social and Environmental Outcomes

AUGUST 2023



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EXECUTIVE SUMMARY

The U.S., alongside other countries, is making significant progress in deploying clean energy among power capacity additions as the global transition to clean energy advances. The U.S. Energy Information Administration forecasts that, in 2023, 82%¹ of the new utility-scale generating capacity proposed for deployment in the U.S. will be clean energy. Energy customers and their partners are critical stakeholders in this evolution, voluntarily procuring over 68 gigawatts of new clean energy capacity in the U.S. since 2014.²

However, not all clean energy is created equal. Leading customers and developers have a chance to accelerate market conditions to catalyze projects that broadly support climate, conservation, and community values while delivering resilient new clean energy projects. Incentives offered through legislation, such as the U.S.'s Inflation Reduction Act and Infrastructure Investment and Jobs Act and the European Union's REPowerEU plan, have created even more urgency to accelerate the clean energy transition. Consideration of environmental and social co-benefits (Beyond the Megawatt [BTM] attributes) in clean energy procurement can help global corporate energy customers meet their sustainability and broader environmental, social, and governance goals (ESG), enhance brand value, improve competitive advantage, and mitigate operational and reputational risks.

Many clean energy customers and developers are already maximizing the social and environmental outcomes of new clean energy projects. Over 60% of U.S.-based corporate energy customers and developers participating in a recent 2023 study by The Nature Conservancy (TNC), the Clean Energy Buyers Institute (CEBI), and Bain & Company stated that they believe this approach will be the new standard in the next five years. Moreover, corporate energy customers expressed an increased willingness to pay for projects that embed social and environmental outcomes, while developers expressed a desire to receive preferential treatment from customers to execute these types of projects more consistently. Opportunities exist for collaboration to incent projects that maximize social and environmental values by:

- **Raising awareness** of the value of BTM attributes among both internal and external stakeholders
- **Evolving clean energy project development and procurement processes** to prioritize sustainability, resilience, and equity attributes
- **Developing an industry standard to embed BTM attributes in clean energy projects** with broad support from important climate, conservation, and community stakeholders
- **Monitoring market readiness for a certification** to verify the social and environmental impacts of a new clean energy project aligned to industry standards
- **Advocating for regulatory policy and legislation** that incentivizes adoption of BTM principles for purpose-driven energy procurement across the clean energy sector

TNC and CEBI continue to partner to raise awareness about the positive impacts clean energy can have on people and planet and the role energy customers and providers can play in maximizing those impacts. In early 2023, the two organizations, along with Bain & Company, conducted a research project to understand the enabling factors to accelerate clean energy deployment at the pace and scale necessary to address the climate crisis without repeating significant injustices of prior energy transitions. This paper shares those research findings and details four specific actions that clean energy customers, developers, and other stakeholder can take in the upcoming years to encourage adoption of BTM principles.



¹U.S. Energy Information Administration. (2023, March 6). *Wind, solar, and batteries increasingly account for more new U.S. power capacity additions*. <https://www.eia.gov/todayinenergy/detail.php?id=55719>

²Clean Energy Buyers Association. (2022). *CEBA deal tracker* [Data set]. <https://cebubuyers.org/deal-tracker/>

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NOTE FROM AUTHORS

This paper aims to raise awareness of the value of embedding environmental and social considerations during corporate clean energy procurement. The principles put forth here build upon the Clean Energy Buyers Institute's [Beyond the Megawatt initiative](#) and the [Beyond Carbon-Free, More Than a Megawatt](#), and [Power with Purpose](#) papers previously published by The Nature Conservancy in collaboration with market partners.

This paper is a culmination of a research project conducted from January to April 2023 by the Clean Energy Buyers Institute, The Nature Conservancy, and Bain & Company.

As part of the project, two surveys were launched to gather perspectives from corporate energy customers and clean energy developers:

80

Energy Customer Survey

PROFESSIONALS RESPONSIBLE
FOR CLEAN ENERGY PROCUREMENT
WITHIN A VARIETY OF CORPORATIONS

41

Energy Developer Survey

STAKEHOLDERS WHO PLAY AN
INTEGRAL ROLE IN THE DEVELOPMENT
AND SUPPLY OF CLEAN ENERGY

The survey results were supplemented with about 30 one-on-one conversations with a representative sample of key energy customers, developers, investors, and service providers to inform the final recommendations.

This paper hopes to advance learning and collaboration across the industry and accelerate a clean, green, and equitable energy transition.



INTRODUCTION

A major transition from fossil-based energy generation to clean energy generation is occurring throughout the world. Local and national governments, corporations, and other organizations are taking the lead in their own ways to accelerate this transition — and setting increasingly ambitious goals around decarbonization. Governments are using a carrot-and-stick approach by creating financial incentives for developers to build out energy infrastructure that will generate, transmit, and deliver low-carbon electricity as well as setting generation mix mandates.

Energy customers and their partners have played a critical role in driving the evolution of the energy market around the globe by voluntarily procuring new clean energy capacity. In the U.S. alone, this capacity amounts to over 68 gigawatts (GW).³ This has been accomplished either directly, by entering into Power Purchase Agreements or Virtual Power Purchase Agreements to offtake energy for long periods, or indirectly, by purchasing financial instruments such as Environmental Attribute Certificates.

In the U.S., the recently passed Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) are supercharging the clean energy industry by allocating approximately \$430 billion in tax credits and loans toward the development of clean energy generation. Analysts estimate that the IRA can help increase annual clean energy capacity additions by up to five times that of pre-IRA levels.⁴

As the IRA and comparable global initiatives accelerate clean energy development, it is vital that this transition away from fossil-based energy is executed swiftly and intentionally, directing as much support as possible to host communities to ensure a just transition. Clean energy development processes need to mature to reduce existing, and at times evolving, barriers to ensure that the climate benefits of the IRA and other policy initiatives are realized. For example, a forthcoming study by researchers from the National Renewable Energy Laboratory finds a significant number of restrictive ordinances for wind and solar across the U.S., including a sixfold increase in restrictive wind ordinances from 286 in 2018 to 1,853 in 2022.⁵ Procurement approaches must be updated to achieve climate goals and ensure an inclusive lens is taken to maximize environmental and social outcomes. A continuous improvement mindset is necessary to ensure that the clean energy market maturation optimizes for people and planet.

As public trust in business hits an all-time high⁶ and expectations continue to increase for the private sector to lead on societal issues like climate action, the role of energy customers in the clean energy transition is more critical than ever. Leading energy customers are taking action through holistic procurement approaches with criteria that prioritize environmental and social outcomes during design, development, deployment, operations and decommissioning of clean energy projects.

The Nature Conservancy (TNC), the Clean Energy Buyers Institute (CEBI), and Bain & Company initiated the Energy Customer and Partner Project Surveys to quantify the growing interest in financial attributes and to present near-term actions that energy customers and their partners can take through procurement processes to advance a just clean energy transition.

³Clean Energy Buyers Association. (2022). *CEBA deal tracker* [Data set]. <https://cebbuyers.org/deal-tracker/>

⁴Jenkins, J. D., Mayfield, E. N., Farbes, J., Jones, R., Patankar, N., Xu, Q., & Schivley, G. (2022). *Preliminary report: The climate and energy impacts of the Inflation Reduction Act of 2022*. REPEAT Project. https://repeatproject.org/docs/REPEAT_IRA_Preliminary_Report_2022-09-21.pdf

⁵Lopez, A. et al. Forthcoming. *Land Ho! How Siting Ordinances Impact Land Availability for Wind and Solar Development*

⁶Edelman. (2022). *Edelman trust barometer 2022*. <https://www.edelman.com/trust/2022-trust-barometer>

DEFINING NONCOMMERCIAL CRITERIA

Beyond the Megawatt (BTM) considerations are the noncommercial criteria of a clean energy project that go beyond price and contract terms, including the following categories:



BEYOND THE MEGAWATT ATTRIBUTES

1

CLIMATE, CONSERVATION, & SUSTAINABILITY

The all-in carbon footprint of a new clean energy project, potential impacts on biodiversity (e.g., wildlife, habitat), and end-of-life management

2

COMMUNITY ENGAGEMENT & SOCIAL EQUITY

Impact of new clean energy projects on local communities upstream and downstream; workforce; and progress on diversity, equity, inclusion, and justice goals

3

ENERGY GENERATION RESILIENCE

Reliability and longevity of a new clean energy project; resilience of the grid, communities, and supply chains

Each category has multiple attributes with a variety of impacts that energy customers and their partners can optimize in any given clean energy project. The CEBI's Beyond the Megawatt initiative, along with complementary frameworks, detail attributes informed by deep industry stakeholder engagement and research, as shown in *Figure 1*.

BTM attributes are well aligned to the Climate, Conservation, and Communities (3C) framework brought forward by the [Beyond Carbon-Free](#) paper developed by TNC, The National Audubon Society, and LevelTen Energy. The 3C framework is demonstrated in other industry leading efforts, such as Salesforce's catalytic [More Than a Megawatt](#) white paper and purpose-focused commitments from major clean energy customers such as Google, Microsoft, REI, Rivian, and Walmart. These efforts reinforce the pivotal role of clean energy customers in realizing the communities, conservation, and climate benefits their procurement can produce through the integration of BTM. "Value of BTM Attributes to Energy Customers" on page 8 explores additional tangible benefits for energy customers.

INSIGHTS FROM THE MARKET:

In one-on-one conversations, energy customers, developers, and providers acknowledged it may not be feasible to have a project or even a portfolio that meets every attribute listed in *Figure 1*. Many customers said they often optimize for a subset of attributes, informed by their corporate goals and the project's characteristics. Developers similarly noted real barriers to being able to incorporate multiple noncommercial attributes into new projects.

Ultimately, customers, developers, and providers alike advocated for maximizing inclusion of BTM principles for purpose-driven energy procurement while taking a pragmatic approach to ensure this focus does not come at the expense of the clean energy transition.

Climate, Conservation, & Sustainability	Community Engagement & Social Equity	Energy Generation Resilience
Wildlife & habitat impact (e.g., impact on bald eagles, activities impacting wetlands)	Impact on local community (e.g., health impact, engaging local community's participation, visual impact from windmills)	Operational resiliency (e.g., on-site clean generation)
Impact on local agriculture (e.g., impact on soil health, displacement of arable land)	Workforce standards & usage of local, diverse labor (e.g., prevailing wages, DEI-aligned recruitment process for staff)	Supply chain procurement risks (e.g., embargos, natural events-related disruptions)
Environmental impact of the upstream supply chain (e.g., environmental impact of extracting raw materials and manufacturing of products, use of low-carbon materials)	Humanitarian impact of the upstream supply chain (e.g., usage of child or forced labor in mining)	Impact of project on nearby grid quality (e.g., measures to minimize additional burden on grid, advanced power plant controls and grid integration solutions)
Project site carbon footprint impact (e.g., impact on or loss of forested lands, developing projects in energy communities)	Ongoing talent development (e.g., solar energy training program for local labor force)	Impact on transmission capacity (e.g., optimizing existing regional transmission infrastructure and avoiding congested corridors or upgrades to existing lines)
End-of-life recycling and disposal (e.g., how wind and solar products will be managed at end of life, contracting with suppliers participating in take-back programs)	Impact on tribal lands or other culturally sensitive areas (e.g., cultural artifact review studies)	Preventive measures against unauthorized interference (e.g., local protests, vandalism)
Return land to its original or alternative use at end of life (e.g., reforestation)	Utilizing local and/or diverse suppliers (e.g., parts, maintenance, and other services)	Long-term viability of new projects and the energy system (e.g., resilience to climate threats)
Carbon intensity of backup generation (e.g., use of clean-energy-powered backup generators)	Impact on historically disadvantaged communities (e.g., clean energy access, economic opportunities through inclusion targets)	Right-sized clean backup generation (e.g., cleaner alternatives to diesel to maintain critical functions through disruptions)

Figure 1:

A non-exhaustive list of BTM attributes that can have a variety of impacts on a new clean energy project

VALUE OF BTM ATTRIBUTES TO ENERGY CUSTOMERS

By embedding BTM attributes as part of a clean energy procurement strategy, clean energy customers can:



Speed up the clean energy transition.

Fewer than [one-fifth of solar and wind proposals](#) actually make it to completion, mostly due to grid interconnection and local permitting issues. [Studies](#) have found that developing clean energy on low-biodiversity land can result in a faster permitting timeline, and developers with a strong equity focus may face less [resistance from local communities to build projects](#). As a result, customers can help speed up the clean energy transition by considering BTM factors to evaluate the environmental and social roadblocks a project may face.



Meet broader corporate goals.

The [Morningstar Corporate ESG 2022 report](#) shows that 90% of companies today have or are developing a formal strategy to manage corporate ESG practices. Maximizing the co-benefits of clean energy transactions can help corporations achieve their ESG goals faster and demonstrate corporate contribution to the [United Nations Sustainable Development Goals](#), [Decade on Ecosystem Restoration](#), and [Guiding Principles on Business and Human Rights](#).



Support stronger financial performance.

An assessment of more than 1,000 research papers by the [New York University Stern Center for Sustainable Business and Rockefeller Asset Management](#) found that 58% of the “corporate” studies that focused on operational metrics, such as return on equity, return on assets, or stock price, found a positive relationship between ESG and financial performance. Institutional investors are also increasingly using social and environmental impact as a framework for evaluating financial risk and opportunities.



Mitigate operational and public relations risks.

Taking proactive actions toward a resilient energy supply prepares businesses for more frequent [extreme climate events](#). Having a comprehensive framework to evaluate social and environmental attributes will also help corporations avoid any potential public relations risks from [ecological calamities](#) or [environmental injustices](#).



Acquire and retain talent.

The next generation of the workforce increasingly expects their employers to have strong environmental sustainability standards. A 2022 [Yale Center for Business and the Environment survey](#) of more than 2,000 global business students found that about three-quarters of respondents believe companies have an equal, if not even bigger, responsibility than governments to meet social and environmental challenges. About 51% are willing to accept a lower salary to work for a company with better environmental practices, and 26% would not accept a job at a company with poor practices (up from 19% in 2015). As this data suggests, demonstrating corporate contributions to nature and society can help attract and retain talent.



Strengthen stakeholder relationships.

Consumers today expect corporations to be a force of change for the greater good. Using energy procurement as a mechanism to improve our society and environment can enhance a corporation's brand value and strengthen its relationships with customers, investors, and suppliers. A [2017 Cone Communications corporate social responsibility study](#) found that 87% of surveyed consumers make purchasing decisions based on values, 76% will boycott based on values, and 88% are more loyal to the company when it supports a social or environmental issue.



Improve competitive advantage.

According to a [2020 Harvard Business Review article](#), companies that improved on material ESG issues significantly outperform their competitors. As the next few sections highlight, most corporate customers expect to incorporate BTM attributes for a significant portion of their clean energy in the next five years. Companies that want to stay ahead of the competition can distinguish their position as industry leaders by becoming early adopters.



Make compliance processes easier.

Adopting an impact framework to procure clean energy will help companies comply with regulations, such as the [U.S. Dodd-Frank Act](#) and the [Uyghur Forced Labor Prevention Act](#). Companies operating across the Atlantic may find that having a higher standard of energy procurement may help maintain compliance with European Union clean energy targets.

STATE OF THE ENERGY-CUSTOMER-LED CLEAN ENERGY TRANSITION

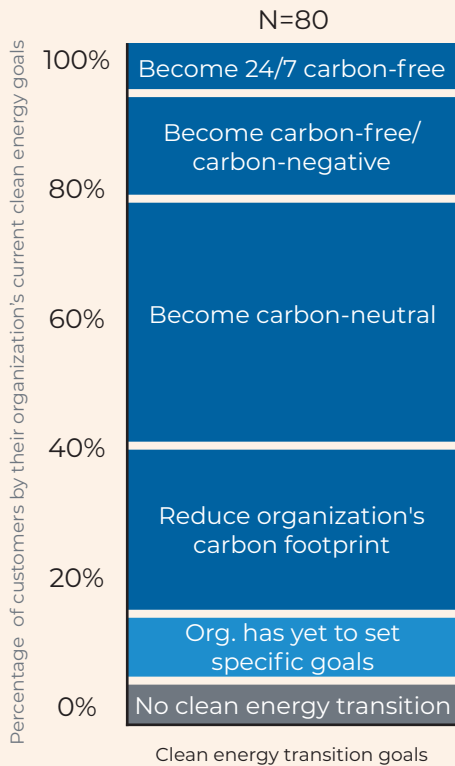


Figure 2: Clean energy transition goals
Source: Energy Customer Survey

Of the 80 Energy Customer Survey participants, over 80% of responding companies indicated they have established specific carbon reduction goals as shown in Figure 2. Energy customers have voluntarily advanced the clean energy transition, resulting in a record 20 GW of contracted clean power in 2022 — representing a 100X increase since 2014.⁷

Figure 3 highlights the key drivers behind energy goals established by survey participants. Responses signal the various internal and external stakeholders energy customers should consider during the goal-setting process to ensure clean energy solutions support broader company commitments.

WHAT IS DRIVING A CLEAN ENERGY TRANSITION AMONG CORPORATIONS?



58%

of the Energy Customer Survey respondents said that their company's broader corporate aspirations are driving their clean energy transition (Figure 3). More than 40% of the respondents expressed external pressures as a major reason for clean energy goals. These external pressures can take the form of competitive (dis)advantage, investor requirements, and reputational risk.

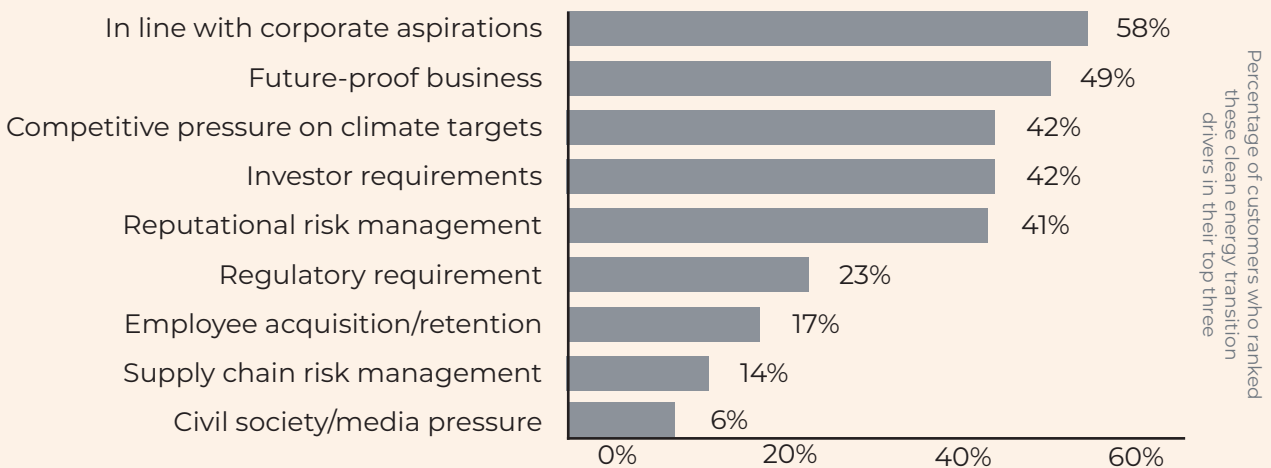


Figure 3: Top reasons for customer's clean energy transition
Source: Energy Customer Survey

⁷Clean Energy Buyers Association. (2022). CEBA deal tracker [Data set]. <https://ceb buyers.org/deal-tracker/>

ARE COMPANIES INTERESTED IN BTM ATTRIBUTES?

The Energy Customer Survey asked about current and expected interest in BTM attributes. More than half of the customers surveyed already consider some attributes during clean energy procurement, and even more (over 60%) expect BTM considerations to become a standard way of procuring clean energy five years from now.

These results demonstrate growing momentum among corporate energy customers toward a more inclusive procurement strategy. However, as discussed in the prior section, not every company is in the same place with their clean energy journey. For this report, surveyed corporate customers in the U.S. were categorized into the following groups based on their current consideration of BTM attributes, ambition of clean energy goals, and sophistication of energy procurement processes:



PIONEERS

Companies with advanced clean energy and ESG goals, including science-based carbon reduction or carbon-free energy goals. Pioneers have sophisticated procurement processes with in-house standards that consider ESG priorities, such as workforce development, and actively consider application of BTM attributes



PRAGMATISTS

Companies with clear and specific clean energy and ESG goals with more incremental approaches. Pragmatists advance clean energy procurement; however, they are less likely to consistently consider and integrate BTM attributes, given limited experience and capacity.

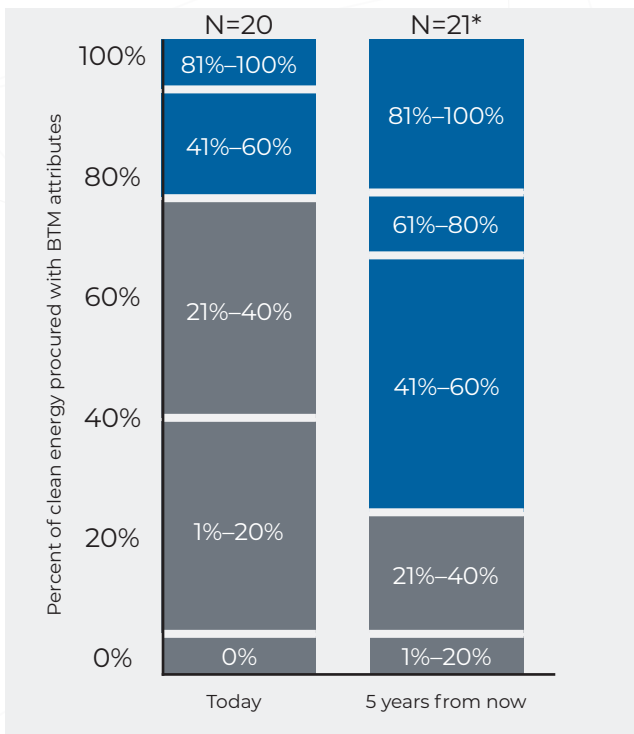


PROSPECTIVES

Companies that do not consider any Beyond the Megawatt attributes during their clean energy procurement. Prospective companies are less likely to have sophisticated procurement processes and well-defined clean energy or ESG goals. Prospectives represent the greatest market opportunity to drive impact through integration of BTM attributes.

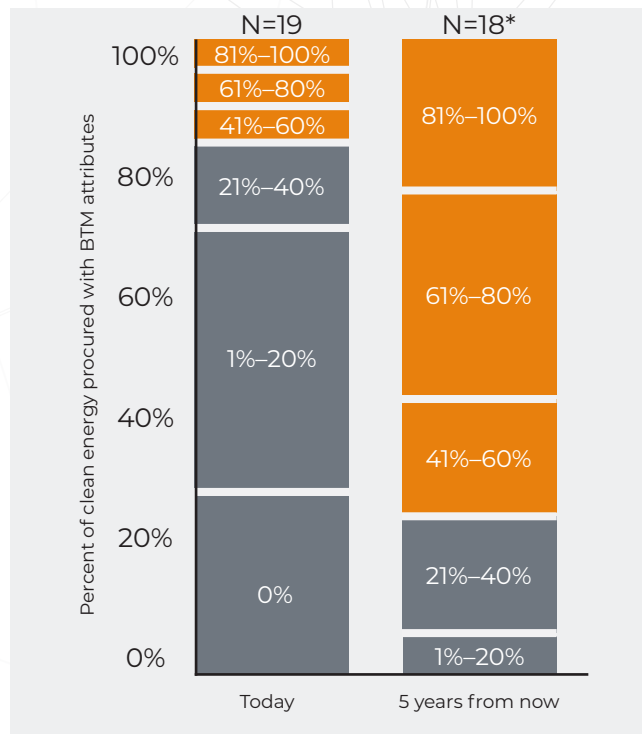
80% PIONEERS

State that most of their future clean energy will include some BTM attributes



70% PRAGMATISTS

State that most of their future clean energy will include some BTM attributes



*Responses that don't use any clean energy today or reported "I don't know" excluded

Figure 4:

Current and expected inclusion of BTM attributes

Source: Energy Customer Survey

As shown in *Figure 4*, the Energy Customer Survey found that about one-fifth of Pioneers and Pragmatists currently procure a portion of their clean energy with BTM attributes (i.e., 40% or more of their total clean energy consumption). However, five years from now, most Pioneers and Pragmatists expect they will procure a sizable portion of their clean energy with these attributes. This expected growth in inclusion of BTM attributes should act as a clear and strong signal to the industry that incorporating BTM principles in clean energy projects could be business as usual in the near future.

INSIGHTS FROM THE MARKET:

In one-on-one conversations, corporate energy customers repeatedly voiced their interest in procuring clean energy with tangible impact stories, given new commitments and rising public attention on ESG topics. Yet many customers said they think about energy procurement and consumption from a portfolio perspective, which challenges their ability to consistently prioritize BTM attributes. Even Pioneers noted they may pursue these attributes in only a portion of their total energy portfolio as they balance other priorities, such as cost, location, and generation.

Pioneers/Pragmatists: Impact story and corporate aspirations as primary value drivers

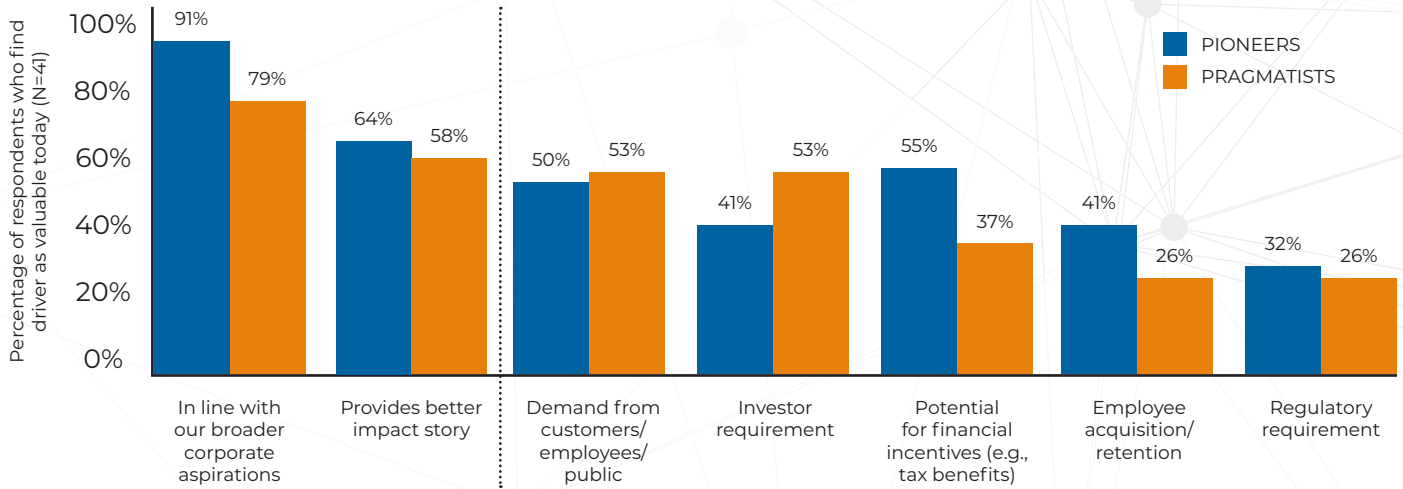


Figure 5: Why Pioneers and Pragmatists find BTM attributes valuable
Source: Energy Customer Survey

Over 90% of Pioneer and 79% of Pragmatist company respondents in the Energy Customer Survey identify BTM attributes as an extension of their organization’s broader goals (Figure 5). Respondents value the resulting impact stories that help build reputational value through industry positioning and support internal efforts to inspire employees. Integration of BTM attributes can also help meet investor expectations and support cost-competitive approaches by using available tax incentives. Current legislation should enable BTM-focused projects to become increasingly cost competitive in the coming years.

As Figure 6 shows, nearly 80% of the companies categorized as Prospectives expressed that BTM attributes are not a priority and currently not integrated in their procurement processes. Prospectives indicate the greatest barrier to integration of BTM attributes is the gap in ability to receive credit and account for their utilization. However, these customers express high interest in procuring clean energy with BTM attributes five years from signaling a growing awareness of evolving industry standards.

Are customers willing to pay for BTM attributes?

One concern voiced by energy developers in one-on-one conversations was that customers’ interest in BTM attributes does not necessarily surface in the project selection process and specifically does not translate into a clear willingness to pay for these attributes.

The Energy Customer Survey found that customers signal a moderate willingness to pay for BTM attributes, ranging from, on average, 4% among Prospectives to 9% among Pioneers above what customers pay today per megawatt hour (MWh) for clean energy. As Figure 7 shows, a small subset of Pioneers, Pragmatists, and even Prospectives demonstrates a substantially higher willingness to pay more than 11% above their current clean energy cost.

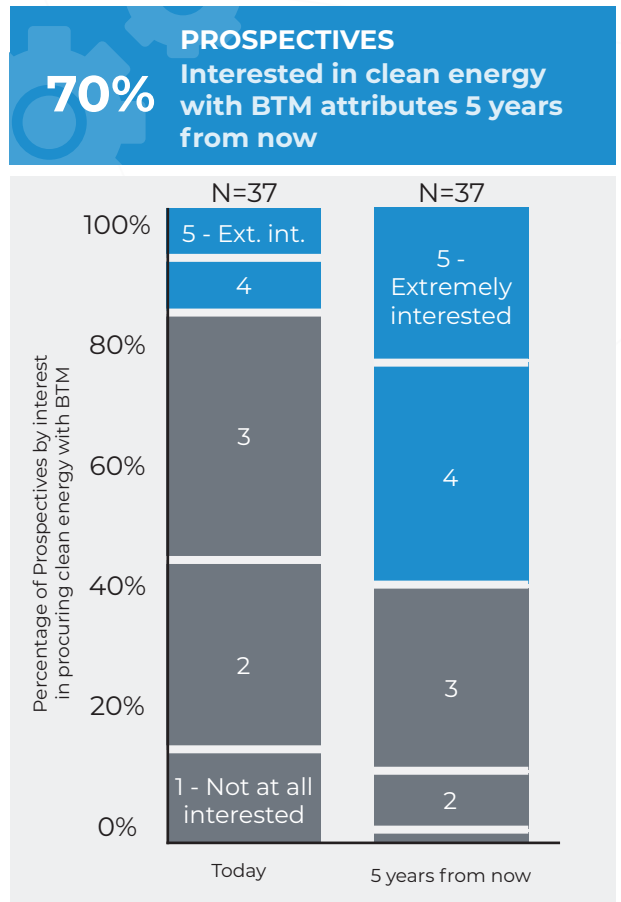


Figure 6: Interest in BTM attributes among Prospectives
Source: Energy Customer Survey

INSIGHTS FROM THE MARKET:

Energy customers noted it is difficult to consistently pay more for BTM attributes across their portfolio or for all energy sources. However, some Pioneers have been able to procure projects with BTM attributes without increasing costs. Therefore, both energy customers and providers anecdotally have said willingness to pay may be more situational: based on the project at hand, organizational goals, and even the broader economic environment.

"Most buyers don't go into these deals wanting to lose money. Buyers are looking for more neutral economics as long as the story lines up with their needs."

– Clean energy service provider

"Our willingness to pay for these attributes shifts around. We may only pay more if there is an explicit goal we've made around DEI and or ESG metrics. The story needs to be strong enough to warrant the cost, but this is proving difficult in today's [economic] environment."

– Pioneer energy customer

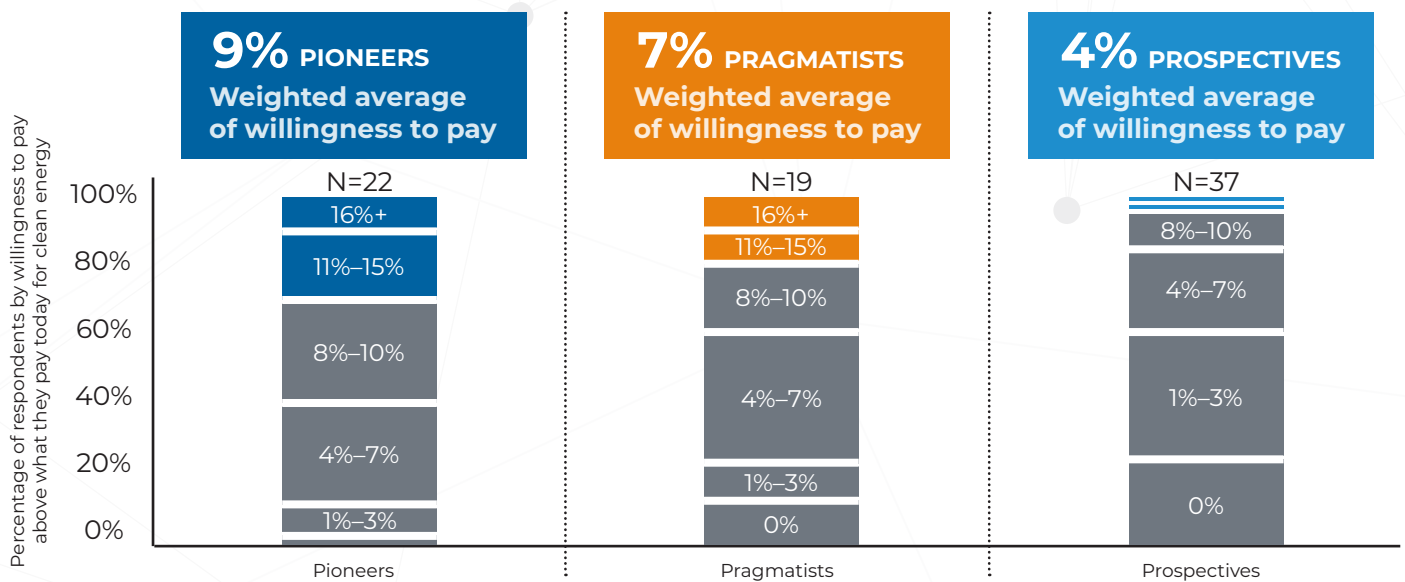


Figure 7: Willingness to pay for BTM attributes. Weighted average calculated by taking the midpoint of each range
Source: Energy Customer Survey

Differences do exist in willingness to pay for BTM attributes by department, frequency of procurement, decision-making authority, and other factors. For example, respondents from sustainability departments tend to cite a higher willingness to pay than respondents from finance departments. These differences exist due to a wide range in understanding the value of BTM attributes. A clear demonstration of the value of BTM attributes to all the stakeholders involved in energy procurement will help ensure these attributes are valued appropriately.

INSIGHTS FROM THE MARKET:

Energy customers highlighted multiple barriers to effectively incorporate BTM attributes into their procurement, including alignment of internal stakeholders and a complex supplier landscape. Internally, clean energy procurement leads must often align multiple stakeholders to the value of projects with these co-benefits amid potentially competing priorities. Customers, specifically Pragmatists and Prospectives that may not frequently procure through bilateral agreements with providers, also cited difficulty navigating the complex developer landscape.

What does this mean for developers? Many energy customers said they would benefit from developers more clearly highlighting the BTM attributes of a clean energy project during the procurement process. Developers' ability to tie the environmental and social benefits of a project to the corporation's broader goals would help customers better communicate the value they will receive (e.g., expedited permitting, reduced project costs, improved community relations) if they select that specific project.

ARE DEVELOPERS INTERESTED IN BTM ATTRIBUTES?

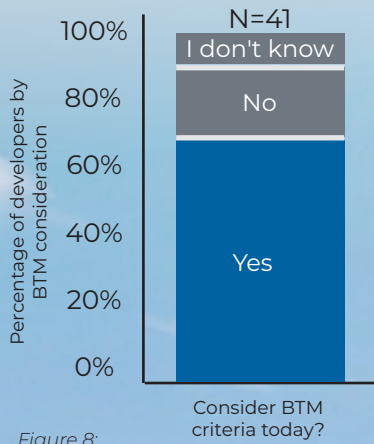


Figure 8:
Developers' interest in BTM
attributes
Source: Energy Developer Survey

Customers will only be able to procure BTM attributes if there is a large enough supply of projects that deliver them. The Energy Developer Survey found that most respondents are interested in incorporating the BTM attributes but face difficulties in doing so in the current market.

Almost 70% of the surveyed developers said they already consider some portion of BTM features today (*Figure 8*) for a variety of reasons. Some attributes, such as certain wildlife impacts, are required by a mix of federal, state, and local agencies. Others (e.g., use of raw materials mined by child or forced labor) are seen as critical to manage a developer's reputational risk.

Many developers also see these attributes as an integral part of their corporate value proposition and have found that considering BTM attributes gives them an advantage over competitors. This results in winning bids by sharing a more impactful story with customers. It can also secure community support, resulting in faster permitting, and reduce risk by screening out sites that would have resulted in controversy or additional cost down the road.

"Our corporate goal is to be a good neighbor. We want to create a site that meets customer needs and avoids headaches down the road that come from permits and unintended consequences."
– Energy developer in one-on-one conversation



Levers that will accelerate developers' adoption of BTM attributes

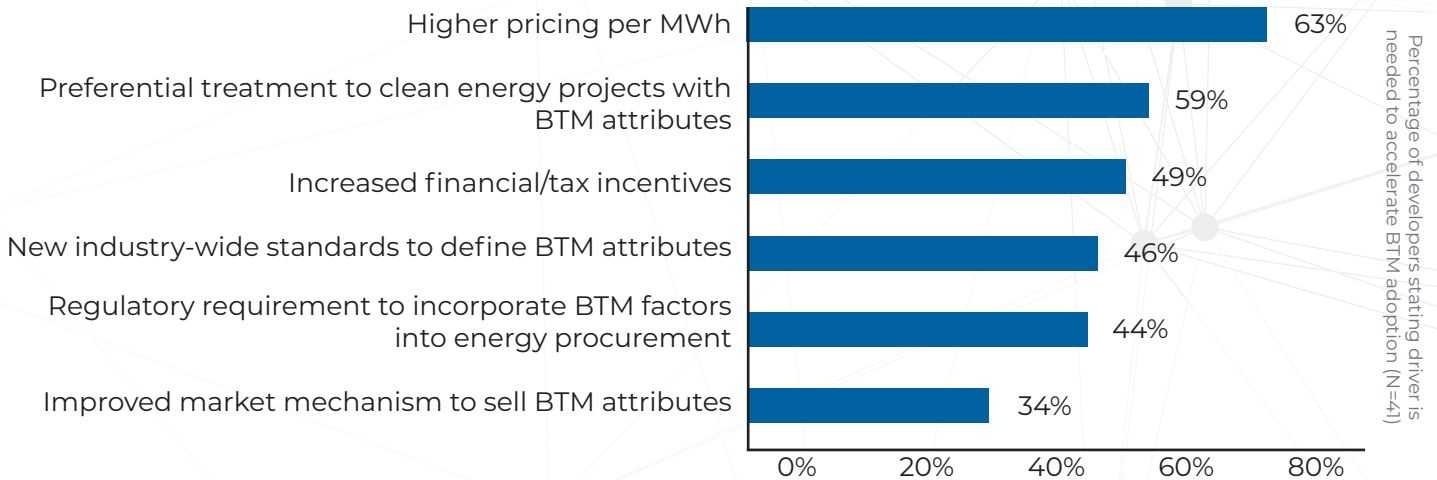


Figure 9:
Levers that will accelerate developers' adoption of BTM attributes
Source: *Energy Developer Survey*

Despite the interest in BTM attributes among developers, many cite difficulty in embedding them consistently. Approximately 80% of surveyed respondents estimated that incorporating BTM attributes into project development will lengthen project duration and increase costs. However, studies have also found that projects sited intentionally to avoid habitat impacts can experience faster permitting, fewer delays, reduced project costs, and less community opposition.⁸

Developers emphasize that the market is lacking consistent demand signals for BTM attributes. There are also differences in which attributes matter most to customers.

When asked what will accelerate the development of clean energy with BTM attributes, approximately two-thirds of the surveyed developers expressed a desire for higher pricing from customers to recoup the anticipated additional cost and interest in preferential treatment evaluation from customers during the selection process (*Figure 9*). Nearly half also seek clarity on which BTM attributes matter the most and how those attributes are defined. About 46% of surveyed developers directly cited industry-wide standards as a potential mechanism to achieve this goal.

Overall, developers see value in BTM attributes and are interested in maximizing the social and environmental outcomes of their projects.

INSIGHTS FROM THE MARKET:

Developers consistently mentioned they can better meet customer needs industry-wide if they see a consistent and ideally standardized set of attributes requested by customers, even from Pioneer customers.

⁸Dashiell, S., Buckley, M., & Mulvaney, D. (2019). *Green light study: Economic and conservation benefits of low-impact solar siting in California*. ECONorthwest and The Nature Conservancy. <https://www.scienceforconservation.org/products/green-light-study>

WHICH BTM ATTRIBUTES ARE CRITICAL TO CUSTOMERS AND DEVELOPERS?

Customers and developers may have a wide range of interests and project features that they care about — informed by stakeholder interest and attributes that can help drive the industry forward faster. The attributes that rose to the top across both stakeholder groups in the Energy Customer and Energy Developer Surveys are listed in *Figure 10*.



NOTE FROM AUTHORS

It is important to note that attributes not listed in *Figure 10* should not be interpreted as not critical for our society and environment. Rather, these answers may reflect a lack of awareness among respondents. The list below simply represents the principles that are best understood and embedded in projects today.



Figure 10: BTM attributes that rose to the top across surveyed energy customers and developers
Source: *Energy Customer Survey, Energy Developer Survey*

RECOMMENDATIONS

Advancement of BTM attributes requires broad actions from a wide range of industry and nonindustry stakeholders. Energy customers, developers, service providers, governments, and advocates can all help advance procurement that is purpose driven.

The following recommendations provide an initial road map for market stakeholders to maximize and accelerate adoption of BTM attributes amid the ongoing energy transition. Each action includes a description of industry-level recommendations as well as concrete and measurable actions customers and developers can take in the near term.

Action 1: Raise awareness of the value of BTM principles among internal and external stakeholders

Action 2: Evolve clean energy project **development and procurement processes**, including sustainability, resilience, and equity attributes, and develop an industry standard as market buy-in and resources become available

Action 3: Monitor **market readiness for a certification** to verify the social and environmental impacts of a new clean energy project aligned to industry standards

Action 4: Advocate for regulatory policy and legislation that incentivize adoption of BTM attributes across the clean energy sector

Action 1: Raise awareness of the value of BTM principles among internal and external stakeholders.

Building awareness is an important foundational step for the industry, especially through peer-to-peer learning exchanges between Pioneer⁹ and Prospective¹⁰ energy customers, as there is a gap in understanding the value of environmental and social considerations in clean energy projects. Energy customers and developers expressed in the energy surveys that raising awareness can build external pressure (through investors, customer preferences, or competitors) for the adoption of BTM attributes (*Figure 11*).

At the industry level, there are four broad levers that can be pulled to raise awareness:

- **Awards** to recognize achievements on BTM attributes
- **Industry events** to have an open dialogue with stakeholders to share the benefits of considering BTM outcomes and to hear their perspectives
- **White papers, publications, and procurement guidance** to summarize industry-wide findings and educate stakeholders on best practices
- **Targeted engagement** to act as a resource hub and help stakeholders incorporate Beyond the Megawatt considerations

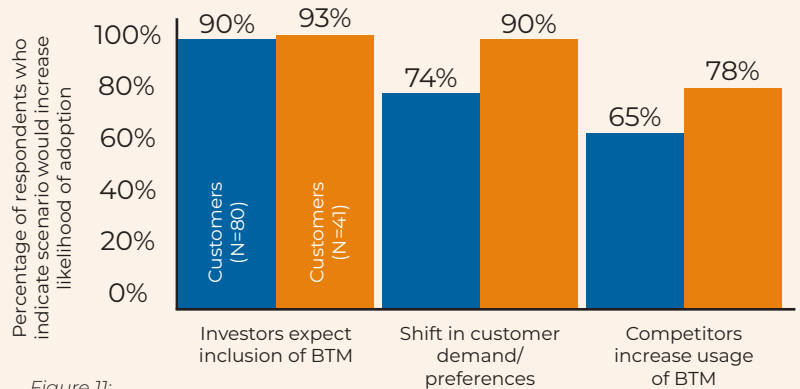


Figure 11: Increase in likelihood of BTM with the presence of various external pressure
Source: *Energy Customer Survey, Energy Developer Survey*

⁹Companies with advanced clean energy and ESG goals, including science-based carbon reduction or carbon-free energy goals. Pioneers have sophisticated procurement processes with in-house standards that consider ESG priorities, such as workforce development, and actively consider application of BTM attributes.

¹⁰Companies that do not consider any BTM attributes during their clean energy procurement. Prospective companies are less likely to have sophisticated procurement processes and well-defined clean energy or ESG goals. Prospectives represent the greatest market opportunity to drive impact through integration of BTM attributes.

Energy Customer & Developer Calls to Action

In tandem with industry-level progress, individual energy customers and developers can take action in the immediate to near term to build BTM awareness for BTM attributes:

- **Deepen your organization’s internal understanding of the value of BTM.** Energy development and procurement processes are complex and require building a coalition among many internal stakeholders. Clean energy advocates can share publications, reports, and other thought leadership on the value of BTM attributes internally to increase recognition of their value. Focusing on informing key decision-makers can lead to greater consideration of social and environmental factors in future clean energy project development and procurement, as well as in organizational advocacy efforts.
- **Share benefits and encourage external stakeholders to adopt BTM attributes.** Publicly sharing BTM commitments and success stories, whether large or small, can be an effective way of educating customers, suppliers, service providers, or other stakeholders in their value chain. Transparency on the key attributes that matter to their organization may encourage external stakeholders to adopt them. When possible, energy customers and developers should consider providing an ongoing attribute preference as well as financial and other incentives to external parties and suppliers that prioritize BTM attributes.

Action 2: Evolve clean energy project development and procurement processes, including sustainability, resilience, and equity attributes, and develop an industry standard as market buy-in and resources become available.

As interest for BTM projects grows, clean energy project development and procurement processes must evolve. In the near term, non-price attributes can be incorporated into individual customer and developer procurement processes. In the long term, a more sophisticated clean energy industry with clear standards and common language can provide the industry-wide guidance necessary for all market participants to apply BTM attributes more consistently. The potential evolution of voluntary solutions in the clean energy industry is outlined in *Figure 12*.

SPECTRUM/EVOLUTION OF VOLUNTARY SOLUTIONS FOR BTM CLEAN ENERGY

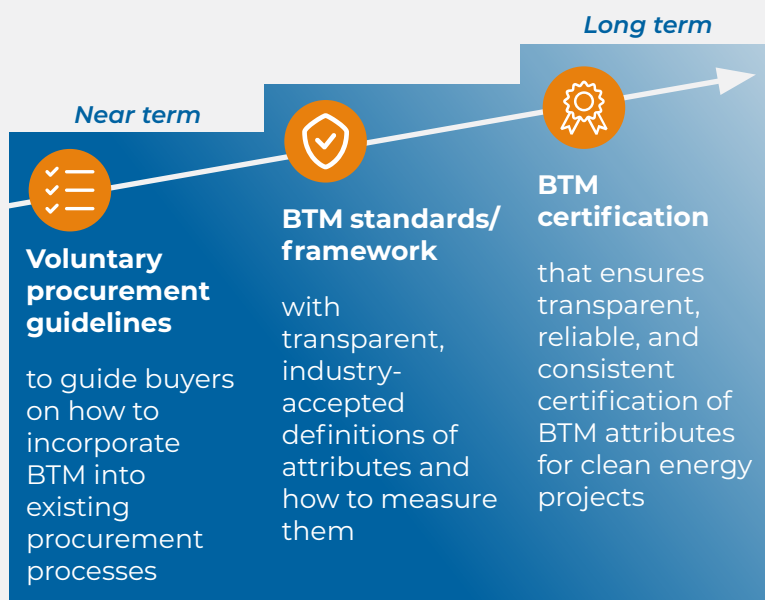


Figure 12: Potential evolution of voluntary solutions to support and accelerate the adoption of clean energy with BTM attributes

Update procurement guidelines to incorporate BTM attributes

In the near term, there is a need for a detailed guidance document on how to include BTM attributes in procurement solicitations (e.g., a list of robust request for proposal [RFP] questions with a clear way to score or measure the responses for each attribute) to help market participants share a common language.

CEBI’s BTM initiative is currently developing a procurement toolkit to provide such guidance, including a list of targeted RFP questions, which is set to be released in 2023. It will incorporate tools and learnings from the Power with Purpose white paper and a toolkit from Rivian and TNC.

Energy Customer & Developer Calls to Action

- Whenever possible, individual energy customers and developers should leverage the guidance produced by CEBI, TNC, and Rivian, as well as any other guidance that is released by clean energy advocates in the future. Energy customers explicitly requesting BTM attributes will provide a clear demand signal to developers, giving them clarity on which attributes to incorporate and raising the bar in the industry.
- Energy customers should focus on explicitly accounting for the incremental values of BTM attributes outlined on page 8 (i.e., risk mitigation, brand value, permitting/community support) when selecting clean energy projects to procure from. In addition, procurement leads can communicate these values to internal stakeholders and ask developers to quantify the value of BTM attributes in their proposals.
- Developers should embed BTM attributes to the maximum extent possible in project design and development and communicate their value during the bidding process.
- Energy customers and developers can leverage partnerships with community organizations and energy- or climate-focused nongovernmental organizations (NGOs) for support with valuating BTM attributes, creating a procurement strategy, or completing project due diligence.

Longer-term action: Develop an industry standard for BTM attributes for the industry

As voluntary procurement guidelines gain traction, the market should leverage that momentum to move toward a standardization of BTM language and clear procurement guidance that can be used by all parties. Creating a common language to define BTM principles will allow industry members to track and share their progress, align with broader ESG goals, and simplify solicitation processes.

Energy Customer & Developer Calls to Action

- Companies that are interested in contributing to the development of a standard should partner with leading NGOs to provide valuable industry experience, guidance, and market perspectives. Pursuing partnerships and providing input will help ensure that a standard is created with the needs and abilities of market participants in mind.
- Customers and developers should strive to align their procurement processes with a standard as it develops to assist adoption by Pragmatists and Prospectives.¹¹
- Establish goals that align with the evolved industry standards to differentiate from competition, motivate employees, and signal conviction in BTM attributes to a broader set of stakeholders (e.g., investors, customers, suppliers).

Action 3: Monitor market readiness for a certification to verify the social and environmental impacts of a new clean energy project aligned to industry standards.

An industry-accepted BTM standard will have the potential to evolve toward a certification model. If the market moves in this direction, a certification program will build trust that all projects are evaluated with the same rigor and will provide a tangible mechanism for energy customers and developers to demonstrate the positive environmental and social impacts of their projects. This model could take different formats (e.g., a third-party-led certification, a REC+ model) but ultimately would serve to provide a reliable method of validating a project's BTM attributes.

¹¹As a reminder, Prospective energy customers are organizations that do not currently consider BTM principles during energy procurement and are less likely to have a sophisticated clean energy procurement process. These types of corporate energy buyers are described in more detail in "Are Companies Interested in BTM Attributes" on page 11.

A certification program would need to deliver on the following criteria:

- Demonstrate low cost to energy customers and developers (or be palatable from a cost perspective)
- Use a clear, broadly accepted, verifiable standard (to be developed, per Action 2)
- Be easy for energy customers and developers to certify
- Include new and, ideally, existing clean energy projects
- Be owned and operated by a credible body with an independent auditing function

It will be critical to monitor customer and developer adoption of BTM attributes to assess when the market is ready for certification. Enabling market conditions for each step of this process will be important to ensuring that participants will accept and use the certification as it develops.

Energy Customer & Developer Calls to Action

- **Be vocal as need for certified clean energy increases.** Stakeholders will look to energy customers first to assess if there is sufficient demand to warrant developing a certification. Customers, especially Pioneers and Pragmatists, should advocate for projects with certified BTM attributes with providers and even state and federal regulators. Customers can use their existing procurement process and industry-wide forums to communicate their evolving needs.
- **Shape the creation of a certification.** As the eventual end users, customers and developers should provide input to certifiers to determine the certification features that will have the most long-term value to the industry (e.g., low cost, easy to communicate). Again, Pioneer and Pragmatist customers should consider proactively partnering with leading NGOs to ensure a potential certification aligns with their needs.

Action 4: Advocate for regulatory policy and legislation that incentivize adoption of BTM principles across the clean energy sector.

Policy solutions (e.g., mandates, tax incentives) can significantly increase the adoption of BTM attributes. All clean energy stakeholders (i.e., developers, energy customers, service providers, advocates) can support policy measures in the following two ways.

Energy Customer & Developer Calls to Action

- **Propagate and leverage the current legislative provisions.** The IRA in the U.S. and similar legislation in other regions provide various tax incentives that promote some of the BTM attributes (e.g., siting on brown fields or within energy communities). Energy customers and developers should aim to proactively embed clean energy development and procurement attributes that are incentivized legislatively, as well as share opportunities within their communities.
- **Advocate for new policies.** All clean energy stakeholders should similarly look to support new policy measures that align with BTM principles for purpose-driven energy procurement through direct advocacy or by financially supporting policy advocates for new legislation at the national and local level. The legislation can be targeted at additional incentives, increased transparency, or set requirements. As a first step, stakeholders should look to educate their internal policy teams on the benefits of BTM attributes to ensure their advocacy aligns with and supports their efforts.

CLOSING REMARKS

This report is one of the first steps in a broader process toward raising awareness on clean energy procurement with environmental, social, and resilience values. The authors welcome the feedback of anyone with valuable perspectives and ideas. CEBI, TNC, and other contributing parties will continue to listen to the guidance of the communities in which clean energy is developed in order to continuously improve on BTM principles. There are a significant number of challenges ahead, but these challenges also represent a tremendous opportunity to create a better world. This collaborative effort between CEBI, TNC, and Bain & Company hopes to realize the clean energy sector's fullest potential in accelerating an equitable and sustainable clean energy transition.

APPENDIX

Climate, Conservation, & Sustainability

- **Project site carbon footprint impact.** Carbon footprint impact represents the net carbon reduction based on project siting decisions. Examples of projects that minimize the carbon footprint impact are avoiding sites that will require deforestation or developing solar farms on unused mines. Given the industry-wide focus on additionality and net carbon reduction, customers and developers find this attribute highly critical. Monitoring the net carbon footprint impact also helps customers protect themselves against any greenwashing allegations. Minimization of the carbon footprint impact is currently a voluntary practice by developers.
- **Environmental impact of the upstream supply chain.** This attribute represents the environmental impact of extracting raw materials and manufacturing products for new clean energy development. An example of this attribute would be using low-carbon materials in project development. Similar to carbon footprint impact, customers and developers value this attribute because it ensures they are having a net positive impact on their decarbonization efforts. Valuation of this attribute is a voluntary practice today.
- **Wildlife and habitat impact.** Often required by federal or local agencies, wildlife and habitat impact assessments are seen as critical by developers and customers. Developers find screening projects with negative wildlife/habitat impact prevents issues later in the project, when mitigating adverse impacts can significantly add to the costs. So, developers are intimately aware of the requirements surrounding wildlife and habitat impact. Developers and customers find this attribute critical in managing their reputational risks (e.g., customers and developers alike don't want media coverage of their wind farm killing bald eagles).

Community Engagement & Social Equity

- **Workforce standards and usage of local, diverse labor.** Workforce standards refer to the working conditions and the prevailing wages paid to employees working the project site. Customers and developers find workforce standards and use of local (and diverse) labor critical, as they help build positive community sentiment and give customers a trackable and tangible outcome to measure. Benefits such as prevailing wages and the creation of local jobs are simple to understand and can create a clear impact story for the public.
- **Impact on local communities.** Similar to the workforce standards and use of local, diverse labor, minimizing any negative impact from the clean energy project on the local communities is critical to ensuring good standing with the community. These negative effects can take the form of health impacts (e.g., dust, toxins) or non-health impacts (e.g., visual impact from windmills). Negative impacts can also be mitigated through proactive measures dedicated to providing community-defined co-benefits to local communities.

Energy Generation Resilience

- **Operational resiliency.** Operational resiliency represents the short-term resilience against outages (e.g., maintenance required, service interruptions). This is deemed especially critical by customers who want a consistent and reliable clean energy supply that matches or exceeds reliability from existing sources. All resilience attributes are currently carried out voluntarily by developers.
- **Long-term viability of new projects and the energy systems.** New clean energy projects should be built keeping long-term climate challenges (e.g., rising sea level) in mind. This will ensure that the generation capacity of the clean energy project can be relied upon for the full life of the generation plant.
- **Supply chain procurement risks.** Resilience against disruption to the supply chain (e.g., from embargoes or natural disasters) is a priority for developers and customers. Recent geopolitical issues have further highlighted the importance of insulating the supply chain from interruptions for developers. The IRA may address some of these interruptions with incentives to spur more domestic content in clean energy projects.

GLOSSARY

3C	Climate, Conservation, and Communities
BTM	Beyond the Megawatt
CEBI	Clean Energy Buyers Institute
DEI	Diversity, Equity, and Inclusion
ESG	Environmental, Social, and Governance
GW	Gigawatt
IIJA	Infrastructure Investment and Jobs Act
IRA	Inflation Reduction Act
MWh	Megawatt Hour
NGO	Nongovernmental Organization
REC+	Renewable Energy Certificate with additional attributes or criteria
RFP	Request for Proposal
TNC	The Nature Conservancy



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