



# Guidance for Supplier Clean Electricity Procurement

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**CEAP** | CLEAN ENERGY  
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 **CRS**

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# Executive Summary

Companies working to increase clean electricity use in their upstream supply chains have lacked guidance on how to design clean electricity procurement programs with comparable criteria and metrics that meet their unique needs while supporting global supplier action. This Clean Energy Accounting Project (CEAP) *Guidance for Supplier Clean Electricity Procurement* (the guidance) was designed through a consensus-based process to improve the design and implementation of supplier clean electricity procurement programs that increase clean electricity use and reflect different clean electricity impacts.

This guidance addresses objectives for supply chain clean electricity procurement and includes best practices for defining, monitoring, reporting, verifying, and enforcing supply chain program metrics related to clean electricity procurement and the impact of suppliers' clean electricity purchases and projects.

As a global set of procurement criteria and metrics, the guidance is a framework that must be customized and applied to different market and supply chain circumstances. However, general considerations for tailoring criteria and metrics to specific markets are provided to help facilitate market-specific implementation. Additionally, a *Supplier Clean Electricity Procurement Checklist* is provided in Appendix A and identifies some of the key action items in the guidance.

## Six-Stage Framework

Six program design stages are defined to reflect the considerations and decisions that are necessary at different points in the development of a supplier clean electricity procurement program. Stages may be applied in the order that best suits a company's needs, and some stages (particularly supplier data collection and goal setting) may be iterative and evolving.

- Understanding upstream electricity use and emissions:
  - Stage 1: Measurement of Supplier Electricity Use
  - Stage 2: Measurement of GHG Emissions Associated with Suppliers' Purchased Electricity
  - Stage 3: Supplier Clean Electricity Procurement and Transaction Analysis
  
- Supplier clean electricity goal setting:
  - Stage 4: Supplier Clean Electricity Procurement Goal Setting
  
- Program launch and implementation:
  - Stage 5: Launch of Initial Supplier Clean Electricity Program
  - Stage 6: Full Supplier Clean Electricity Program Implementation

These sections of the guidance provide a set of common practices, objectives and outcomes, and procurement criteria and metrics to standardize supplier clean electricity programs.

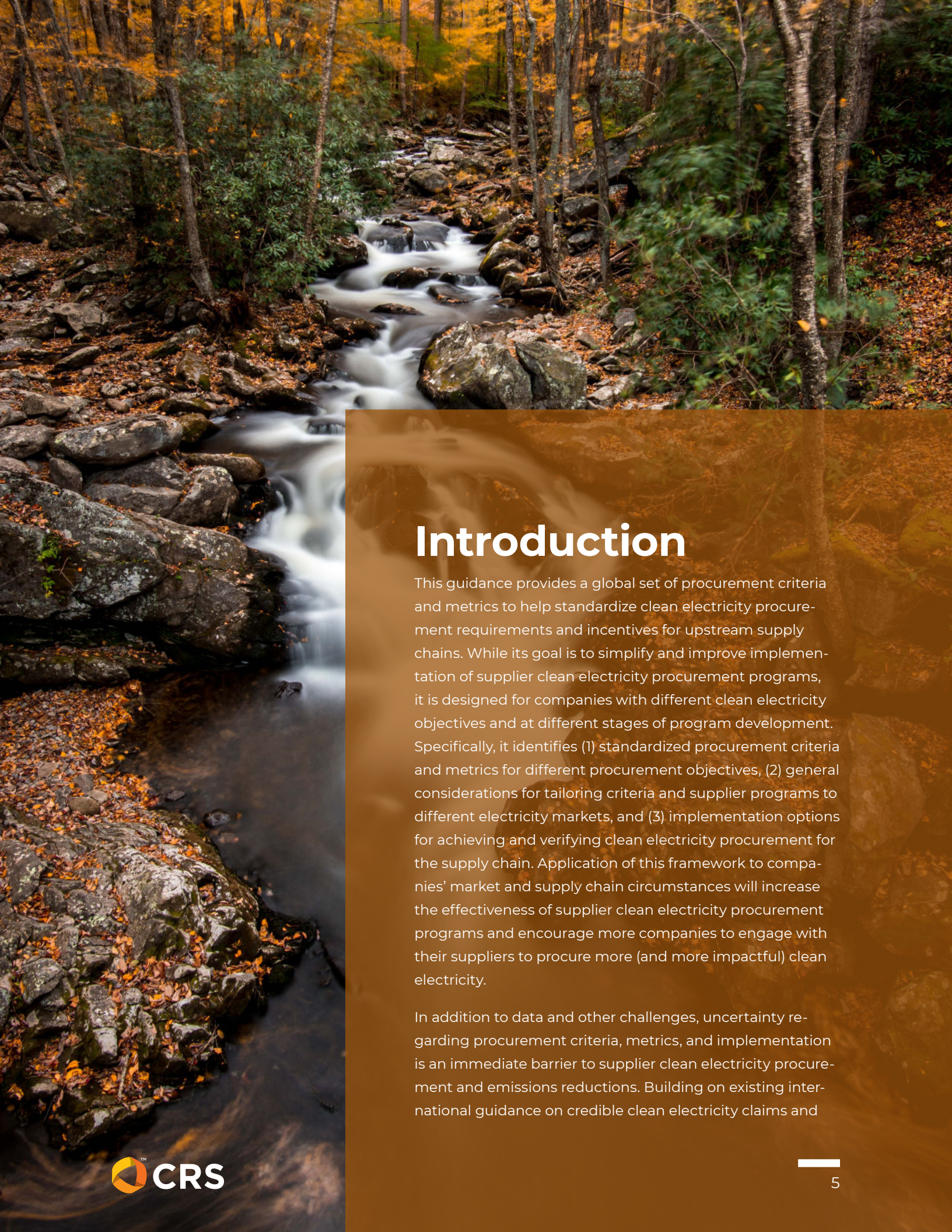
## Program Options

The guidance also provides a range of options for implementing programs built utilizing the six-stage framework. Program design, data collection, accounting (allocating and recording

transactions), and verification options are all provided to support the variety of effective programs that may best suit companies operating in different sectors and markets.

## Conclusion

Application of this guidance to companies' market and supply chain circumstances will increase the effectiveness of supplier clean electricity procurement programs and encourage more companies to engage with their suppliers to procure more (and more impactful) clean electricity. Broad acceptance and use of this guidance will additionally help facilitate efficient, standardized data collection and reporting, which may remove some barriers to collaborative supplier engagement on clean electricity.



# Introduction

This guidance provides a global set of procurement criteria and metrics to help standardize clean electricity procurement requirements and incentives for upstream supply chains. While its goal is to simplify and improve implementation of supplier clean electricity procurement programs, it is designed for companies with different clean electricity objectives and at different stages of program development. Specifically, it identifies (1) standardized procurement criteria and metrics for different procurement objectives, (2) general considerations for tailoring criteria and supplier programs to different electricity markets, and (3) implementation options for achieving and verifying clean electricity procurement for the supply chain. Application of this framework to companies' market and supply chain circumstances will increase the effectiveness of supplier clean electricity procurement programs and encourage more companies to engage with their suppliers to procure more (and more impactful) clean electricity.

In addition to data and other challenges, uncertainty regarding procurement criteria, metrics, and implementation is an immediate barrier to supplier clean electricity procurement and emissions reductions. Building on existing international guidance on credible clean electricity claims and

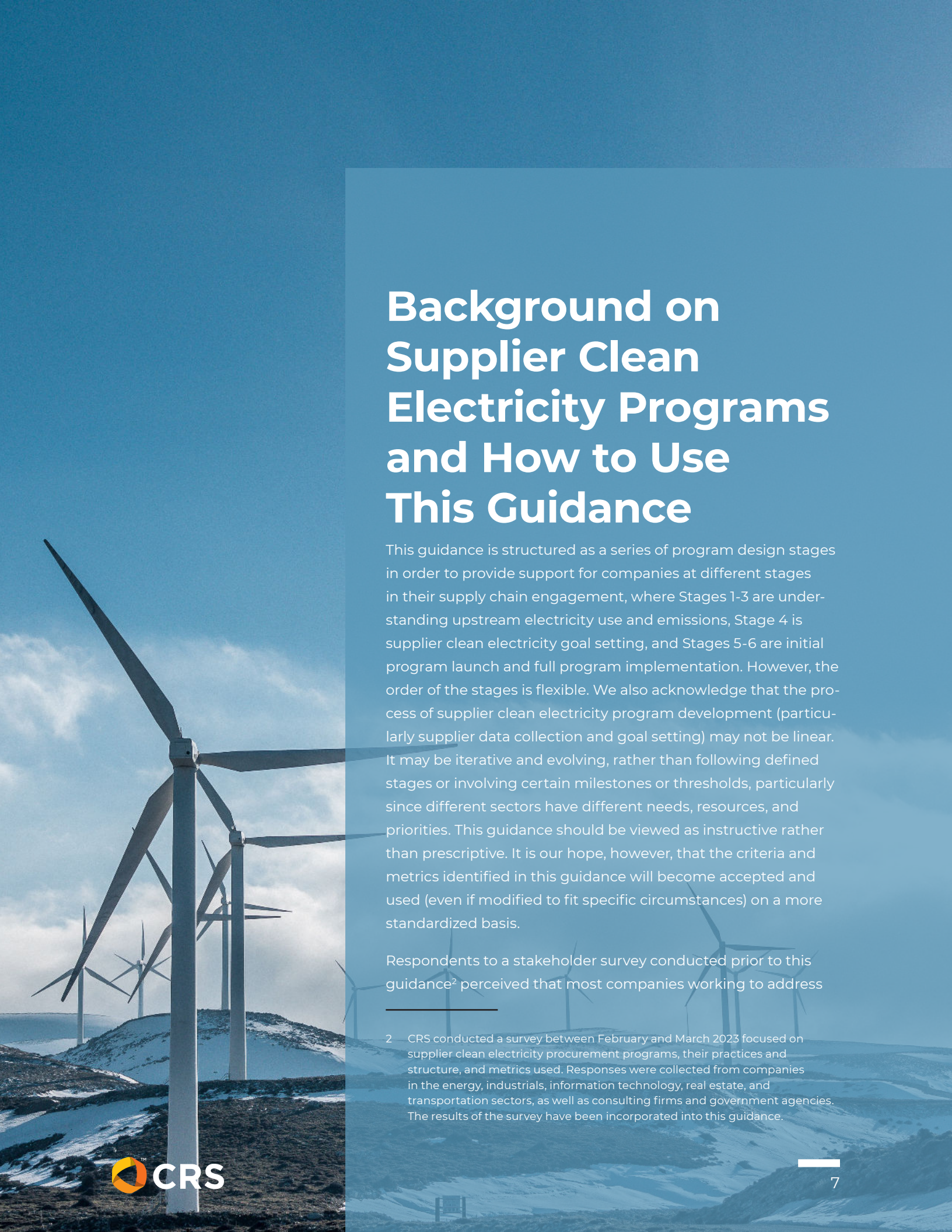
accounting,<sup>1</sup> this guidance addresses objectives for supply chain clean electricity procurement specifically and how supply chain programs are monitored, reported, verified, and enforced. It also addresses the impact of suppliers' clean electricity purchases and projects.

This guidance is supplemented by a background report, *Scope 3 GHG Accounting for Upstream Clean Electricity Use*. That report describes challenges with current accounting approaches for scope 3 reporters seeking to understand and address emissions arising from electricity use in their upstream supply chains. It outlines recent proposals for refinements and identifies areas where additional guidance is needed to better reflect emissions associated with upstream energy use. It also includes relevant information about supplier electricity use data collection and estimation as well as allocation of electricity use to customer products and services, which will be needed for supplier clean electricity procurement programs.

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1 See Braslawsky et al. (April 2016). *Making Credible Renewable Electricity Usage Claims*. Published by RE100. Available online at: [www.there100.org/sites/re100/files/2020-09/RE100%20Making%20Credible%20Claims.pdf](http://www.there100.org/sites/re100/files/2020-09/RE100%20Making%20Credible%20Claims.pdf)

2 Also see Sotos, M. 2015. *GHG Protocol Scope 2 Guidance: An Amendment to the GHG Protocol Corporate Standard*. World Resources Institute. Available at: [ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance.pdf](http://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance.pdf)



# Background on Supplier Clean Electricity Programs and How to Use This Guidance

This guidance is structured as a series of program design stages in order to provide support for companies at different stages in their supply chain engagement, where Stages 1-3 are understanding upstream electricity use and emissions, Stage 4 is supplier clean electricity goal setting, and Stages 5-6 are initial program launch and full program implementation. However, the order of the stages is flexible. We also acknowledge that the process of supplier clean electricity program development (particularly supplier data collection and goal setting) may not be linear. It may be iterative and evolving, rather than following defined stages or involving certain milestones or thresholds, particularly since different sectors have different needs, resources, and priorities. This guidance should be viewed as instructive rather than prescriptive. It is our hope, however, that the criteria and metrics identified in this guidance will become accepted and used (even if modified to fit specific circumstances) on a more standardized basis.

Respondents to a stakeholder survey conducted prior to this guidance<sup>2</sup> perceived that most companies working to address

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<sup>2</sup> CRS conducted a survey between February and March 2023 focused on supplier clean electricity procurement programs, their practices and structure, and metrics used. Responses were collected from companies in the energy, industrials, information technology, real estate, and transportation sectors, as well as consulting firms and government agencies. The results of the survey have been incorporated into this guidance.

supply chain operations are at earlier stages of implementing supplier clean electricity procurement activities: either measuring supplier electricity use and associated emissions or limited engagement with suppliers providing resources and strategies. We have observed that most companies with supply chain programs are pursuing activities related to educating suppliers about clean energy and emissions reporting, helping suppliers set their own clean or renewable energy goals or emissions goals in alignment with the company's, and pursuing individual project development options (sometimes jointly with suppliers) in specific markets. We place these activities in the launch of an initial supplier clean electricity program (Stage 5). In parallel, companies will often work toward measurement of supplier electricity use (Stage 1) and GHG emissions associated with supplier purchased electricity (Stage 2). These activities (in Stages 1, 2, and 5) are also those on which most supply chain engagement discussions and assistance programs are focused and providing resources.<sup>3</sup>

Our stakeholder survey also indicated that companies have varying amounts of staff and other resources to administer supplier clean electricity procurement programs, and they can be quite limited, e.g., the equivalent of less than one full-time employee within an existing supplier engagement/management team and no dedicated budget for the program.

Following our description of the Stages and procurement criteria and metrics, we provide program implementation options, including options for program design, data collection and

reporting, allocating and recording transactions, and verification.

While some elements of this guidance are applicable to clean electricity procurement for downstream electricity use as well as non-electricity energy use and procurement, this guidance is focused on clean electricity procurement in the upstream supply chain. In addition, it is guidance for establishing supply chain programs. It does not include complete rules or procedures for clean electricity transactions and accounting for the supply chain, or instructions for how to carry out or record transactions to support clean electricity procurements on behalf of either suppliers or customer companies in specific markets.<sup>4</sup> Finally, this guidance does not address all supply chain and supplier objectives, circumstances, or market circumstances. Rather, it provides general guidance and a global set of procurement criteria and metrics along with general considerations for tailoring them to specific markets as well as relevant examples highlighting specific supplier procurement circumstances. As a result, this is not a document that can be directly implemented or a standard that can be directly applied. It is a framework that must be customized and applied to different market and supply chain circumstances.

Specific guidelines for companies in each of the following Stages are bolded.

<sup>3</sup> For example, see Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: <https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf>

<sup>4</sup> This is, however, addressed briefly in the section on Supplier Clean Electricity Program Implementation Options.



# Stage 1: Measurement of Supplier Electricity Use

Supplier clean electricity procurement begins with accurate measurement of supplier electricity use associated with company products or services. **Direct engagement with Tier 1<sup>5</sup> suppliers to collect primary usage data is recommended. Primary data should be as precise as possible, with the most precise being source-specific usage data, then facility-specific, followed by supplier-specific. The data should be measured on at least an annual basis, with no more than a one-year delay, if possible.** Longer timeframes and delays may be acceptable but are less preferred. The data should be based on electricity bills or metered usage. Other considerations for primary data collection can be found in Sec. 3.1 of the *Scope 3 GHG Accounting for Upstream Clean Electricity Use* Background Report (“Scope 3 Background Report”).

Estimated electricity usage and secondary usage data—data that reflects operations that are not specific to the supplier and proxy data from a different supplier—may be used where actual and primary usage data is not available. Secondary

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<sup>5</sup> A Tier 1 supplier provides products or services directly to the company, whereas Tier 2 suppliers provide products or services to a Tier 1 supplier.


data considerations are discussed in Sec. 3.2 of the Scope 3 Background Report. There are many factors affecting the availability of primary supplier electricity usage data, including the size and sophistication of the supplier, the country/market where the supplier is located, and the supplier's sector or industry.

Data sensitivity and confidentiality concerns also represent a challenge for collecting electricity usage data from suppliers. These may be mitigated with confidentiality agreements and other arrangements. However, this will require significantly more engagement on the part of both suppliers and customer companies. Alternatively, companies may consider the use of third parties, e.g., sustainability consultants or other companies, to mediate the collection, storage, and distribution of load data. This may allow this data to be used (e.g., to inform clean energy purchases or for a verification audit) without necessarily requiring the supplier to fully disclose its load and the portion of the supplier's business for which the company is responsible.

There must also be a method for allocating supplier electricity use to a company's products or services, employed by either the supplier or the customer company. Allocation methods are

also discussed further in Sec. 3.3 of the Scope 3 Background Report. There is currently no single recommended allocation method or order of allocation methods. There are a number of potential allocation methods that could be used, e.g., based on square footage of the relevant facilities or (estimated) proportions of overall production, certain production lines, or production time (or a standard production time value). **Allocation methods should be as precise as possible with respect to the customer company's products and services. Allocation methods should also be used as consistently as possible across the supply chain, or at least within certain markets and industries.**

Finally, while primary data about electricity use is most likely to be available from Tier 1 suppliers, as a part of this first stage of supplier clean electricity program design, **companies should develop methods for estimating electricity usage for Tier 2+ suppliers, and where possible, begin engaging with Tier 2 suppliers about electricity use practices and trends.** In addition, data modeling tools may be available to gain visibility deeper into supply chains and to identify and estimate emission-intensive priority areas.



## Stage 2: Measurement of GHG Emissions Associated with Suppliers' Purchased Electricity

While it is not necessary to calculate the GHG emissions associated with the supplier electricity usage measured in Stage 1 (i.e., the company's share of supplier Scope 2 GHG emissions) in order to pursue procurement of clean electricity for this use, very often emissions and climate goals are driving interest in these programs and this represents a useful baseline on which to make clean electricity procurement program decisions. Calculating these emissions requires resource mix and/or emissions factor data applicable to the supplier's operations, e.g. from electricity providers, regional, or national data sources. Companies can collect this data to apply to electricity usage data collected in Stage 1, and/or they can request electricity-related emissions information from suppliers. In this case, data requests should be simultaneous to minimize reporting burden and transaction costs. If emissions information is collected from suppliers directly, there may be a lack of visibility into the emissions factor information or emissions accounting that the supplier used. Evaluating the quality of that emissions data using the following criteria would then not be possible.

**Companies should identify the best emissions factor data sources for Tier 1 suppliers (and other tiers of suppliers where possible) based on the following.<sup>6</sup>**

- Data should meet the Credibility Criteria on pg. 6 of CEAP’s March 2021 report on *Accounting for Standard Delivery Renewable Energy*.<sup>7</sup>
- The hierarchy of emissions data in Table 1, which is consistent with the Market-based
- Scope 2 Data Hierarchy (Table 6.3) in the GHG Protocol’s 2015 *Scope 2 Guidance*<sup>8</sup>, is recommended. Data is listed in order of preference from top to bottom.
- Authoritative and reliable sources are preferred.
- Verified data sources are preferred (e.g., as opposed to self-reported generation data).
- Data sources using calculation methodologies that are more precise and

*Table 1. Purchased Electricity Emissions Factor Data Hierarchy*

RESOURCE MIX OR EMISSIONS FACTOR DATA	DESCRIPTION
Electricity Product-specific Data	The resource mix and/or emissions factor of the electricity sold to the supplier, as a discrete offering or portfolio and marked by a specific fee or rate and/or a specific mix of generation resource types and associated attributes compared to other portfolios offered.
Electric utility- or Supplier-specific Data	The resource mix and/or emissions factor of the electricity sold by a specific retail electricity provider to its retail customers, reflecting all transactions of generation and generation attributes.
Market-specific Residual Mix	The resource mix and/or emissions factor of the unclaimed or publicly shared electricity sold to retail customers, reflecting transactions of generation and attributes, in a specific electricity market or grid region.
Market-specific Grid Average	The average resource mix and/or emissions factor of the generating resources operating in a specific electricity market or grid region.

6 More information can be found on pg. 4–7 of CEAP’s March 2021 report *Accounting for Standard Delivery Renewable Energy*, available at: [resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf](https://resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf).

7 CRS. March 2021. *Accounting for Standard Delivery Renewable Energy*. Clean Energy Accounting Project. Center for Resource Solutions. Pg. 4-6. Available at: [resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf](https://resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf).

8 Sotos, M. 2015. *GHG Protocol Scope 2 Guidance: An Amendment to the GHG Protocol Corporate Standard*. World Resources Institute. Pg. 48. Available at: [ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance.pdf).

comprehensive, e.g., in terms of resource and transaction types, are preferred.

- Transparent data sources are preferred, for which the calculation methodology and assumptions are public.
- Data representing a period of time that matches that of the electricity usage data as closely as possible is preferred.
- Data sources that are more recent and more frequently updated are preferred.
- Accounting for multiple GHGs is preferred (e.g., CO<sub>2</sub>e vs. CO<sub>2</sub> only).

These guidelines for identifying preferred emissions factor data sources are listed in a general order of importance. But where there are multiple relevant data sources that are preferred for different reasons, companies must use their best judgement to choose between them.

Many markets lack consistent public emissions data within and across the categories in Table 1, including more developed markets like the U.S., and some markets lack any kind of reliable emissions factor or resource mix data. Companies can advocate for improvements to this data. The best available data should be used for each supplier circumstance.



## Stage 3: Supplier Clean Electricity Procurement and Transaction Analysis

Companies developing supplier clean electricity programs must gain an understanding of how electricity can be purchased by or on behalf of their suppliers and by the electricity providers/utilities serving their suppliers in different markets. This includes how power is transacted on a resource-specific or “specified” basis by electricity providers serving their suppliers; how specified power can be procured by or on behalf of suppliers; whether and how generation attributes are tracked separately from electricity, e.g., using energy attribute certificates (EACs); what options are available to suppliers or the company to procure specified electricity and/or attributes; and what regulatory and voluntary programs are affecting or available to support procurement of specified power.

**Companies should seek or conduct analysis of electricity market structure and electricity procurement options and costs, as well as analysis of existing clean electricity market infrastructure, e.g., certificates and tracking systems.**

Since electricity and generation attribute markets are dynamic and regional, this analysis should be performed for each

country (or electricity market) in which a company has suppliers and updated with some frequency. Ideally, it involves engagement with

utilities and government regulators, and it considers the different elements included in Table 2.

Table 2. Elements of Electricity Market Analysis

ELEMENT	IMPORTANCE
Wholesale and retail electricity market structure. <sup>9</sup>	Market structure will determine clean electricity procurement options and partners.
Laws and regulatory framework governing the electricity sector.	General regulatory landscape will determine clean electricity availability, regulation, procurement options, claims, and stakeholders.
Laws and regulations affecting specified procurement and delivery, and potentially affecting retail use claims. <sup>10</sup>	Legal framework for specified power delivery and use will determine clean electricity procurement options, claims, and impact.
Use and availability of generation attribute tracking infrastructure and market instruments (e.g., EACs).	Market instruments and clean electricity tracking will determine clean electricity procurement options and requirements, and reporting and verification.
The currently available and future options for active procurement of electricity on a resource-specific basis or EACs by commercial customers of different sizes in different locations. <sup>11</sup>	Availability of different options will determine clean electricity procurement activities, cost, impact, and opportunities for near term and long term achievement of clean electricity goals.
The legal enforceability and general credibility of these options. <sup>12</sup>	Credibility of different procurement options and instruments relative to international credible claims criteria will determine choice of procurement options and requirements.
The short-term and long-term costs of those options, and costs relative to current or default electricity costs.	Costs will determine selection of different procurement options.

9 For example, regulated vs. restructured wholesale markets, bilateral vs. centralized/organized market trading, retail choice, etc.

10 For example, mandates and other incentives and policy mechanisms supporting clean and renewable generation, including Renewable Portfolio Standards (RPS), feed-in tariffs (FITs), etc.

11 For example, through self-generation (ownership or leasing arrangements) or purchases from local utilities, competitive suppliers or community aggregation entities, directly from individual generators, or EAC marketers or trading platforms.

12 For example, relative to criteria in RE100's 2016 *Making Credible Renewable Electricity Usage Claims* and the Scope 2 Quality Criteria in the GHG Protocol's 2015 *Scope 2 Guidance* (Pg. 60).

ELEMENT	IMPORTANCE
The characteristics of currently operating and planned electricity generation by applicable region, including resource type, facility size, and age.	Available and planned clean and renewable generation will determine current and future clean procurement options and cost.

Companies may also be interested in the following:

- The presence of other environmental markets affecting the electricity sector, e.g., emissions trading, offset markets, clean fuel markets.
- The presence of carbon border taxes or other carbon value transfers.
- The calculation and availability of retail power source data, residual mixes, and other data.

A company’s capacity and/or resources available to conduct this analysis in different parts of the world and in different sectors may be limited.

**Companies should, first of all, defer to regional standards for electricity products and procurement where they exist, e.g., a regional Green-e® Renewable Energy Standard, provided that they are developed through open and transparent processes and involve this level of in-depth market analysis.** Where regional standards do not exist, electricity market analysis or information may be available from organizations or initiatives that support corporate clean electricity procurement, such as the Clean Energy Buyers Association (CEBA) and the RE100 Initiative (e.g., RE100 Market Briefings for Japan and the Chinese GEC System<sup>13</sup>).

<sup>13</sup> See the RE100 Publications page for more information: [www.there100.org/our-publications](http://www.there100.org/our-publications).



# Stage 4: Supplier Clean Electricity Procurement Goal Setting

Based on information about supplier electricity use, associated emissions, and procurement options (in Stages 1-3), companies must determine the scope, objectives, desired outcomes, and other parameters for their supplier clean electricity procurement programs.

## Scope

**Companies should identify the depth of supply chain covered by the initial program and for which clean electricity goals are to be set (e.g., Tier 1 only, Tiers 1 and 2, etc.). Alternatively, companies can identify groups of suppliers within or across Tiers (e.g., by product line). Companies should also identify the geographic scope and markets covered by the initial program (e.g., global or only certain countries).** In making these determinations, companies will want to consider:

- Spend/cost limitations for suppliers;
- Large or emissions-intensive suppliers;
- Emissions-intensive parts of the supply chain (or typical for industry);<sup>14</sup>
- Industry and regional coverage;

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<sup>14</sup> See Accenture. (2022). *Thought you knew the Scope 3 issues in your supply chain? Think again.* <https://www.accenture.com/content/dam/accenture/final/markets/growth-markets/document/Accenture-visibility-into-scope-3-emissions-in-supply-chain-report-option-optimized.pdf>.

- Risk in certain markets or parts of the supply chain; and
- Market maturity.

**Companies should determine the amount or percentage of clean electricity they wish to achieve for the covered supply chain and markets, i.e., the clean electricity target, (e.g., 100% clean electricity for covered suppliers), either for certain suppliers, in certain markets, or consistently across suppliers and markets.**

The Science Based Targets Initiative (SBTi) has recommended both setting scope 3 targets and identifying suppliers to include in the target using a scope 3 screening and inventory process.<sup>15</sup> Its guidance for supplier engagement, targets, and programs to address scope 3 emissions is clearly related to this guidance for

supplier clean electricity procurement, and the same screening and inventory process that is used to rank suppliers according to their portion of total supply chain emissions can also be used as the basis for identifying suppliers to include in a supplier clean electricity procurement program.

Companies should select procurement objectives and limitations, globally or for each market covered, for the initial program. **Companies should define the resources they want: renewable, carbon-free, some combination of the two, or some other definition of “clean” or “sustainable,” and any restrictions within these categories or for specific resource types (e.g., biomass and hydropower)<sup>16</sup>.** Table 3 shows some resource categories that may be used.

Table 3. Potential Clean Resource Categories

RENEWABLE	CARBON-FREE	RENEWABLE OR CARBON-FREE	RENEWABLE AND CARBON-FREE
Biomass	Geothermal	Biomass	Geothermal
Geothermal	Hydropower	Geothermal	Hydropower
Hydropower	Nuclear	Hydropower	Ocean
Ocean	Ocean	Nuclear	Solar
Solar	Solar	Ocean	Wind
Wind	Wind	Solar	
		Wind	

15 See Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

16 For example, the Green-e® Standards for different markets set eligibility limitations on certain types of biomass (solid, liquid, and gaseous) as well as certain types of hydropower. Those standards are available at: [www.green-e.org/programs/energy/documents](https://www.green-e.org/programs/energy/documents).

Respondents to our stakeholder survey indicated that most companies prefer renewable resources (that include biomass but not nuclear) for supplier procurement, or a different definition of “clean” that is consistent with the company’s clean electricity procurement goals for its own operations.

**Objectives, Desired Outcomes, and Other Parameters**

**Companies should identify the outcomes of clean electricity generation and procurement in the supply chain that they seek to achieve or advance and measure (“desired outcomes”).** In Table 4, we have identified certain desired outcomes of supplier clean electricity procurement programs and organized them into five broad categories.

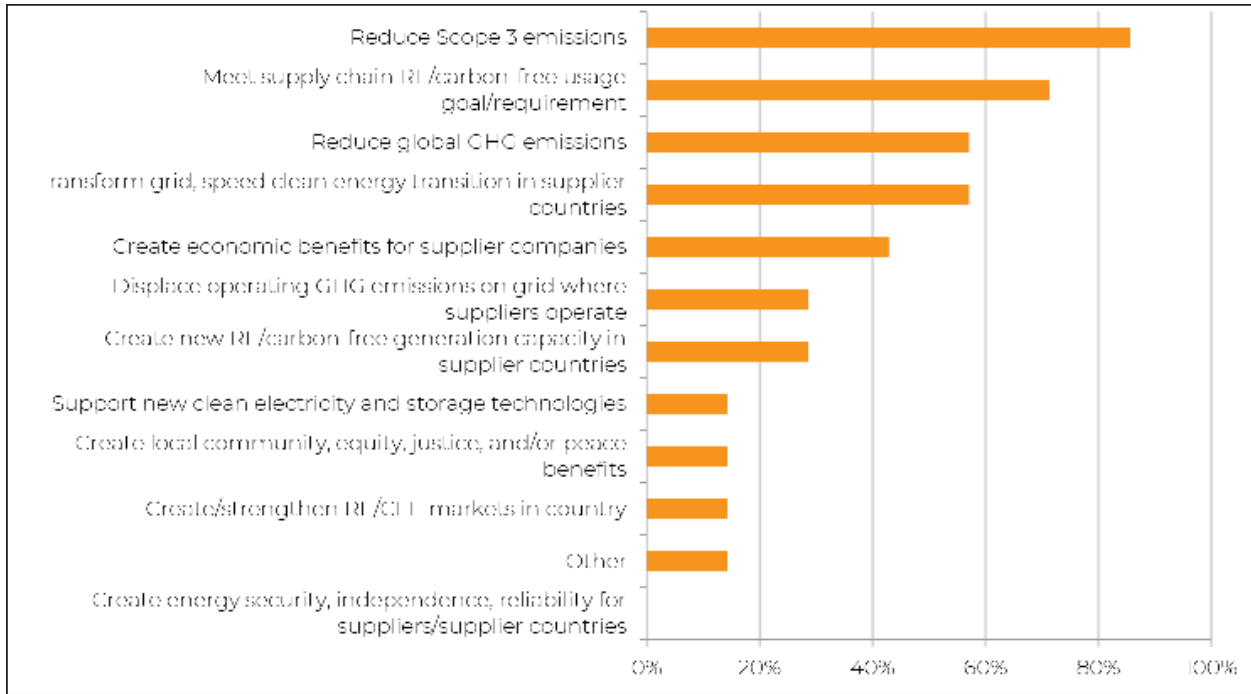
*Table 4. Desired Outcomes of Supply Chain Clean Electricity and Procurement*

CATEGORY	DESIRED OUTCOME
Accountability	Credible usage and Scope 2 emissions claims for suppliers
New Clean Electricity and Emissions Impact	Provide demand to drive the development of clean electricity
	Avoid grid GHG emissions
	Reduce global GHG emissions
	Directly enable/create new clean electricity generating capacity/supply
Technology or Business Innovations	Grid transformation and clean electricity integration
	Support new technologies
Community Benefits	Strengthen clean electricity markets in country
	Local community health, equity, justice, and/or peace benefits
Economic and Energy Security Benefits	Economic benefits for suppliers
	Energy security, independence, reliability for suppliers or supplier countries

**Table 4 is a set of common categories and outcomes to standardize supplier clean electricity programs, but** is not comprehensive. For example, other categories may include water pollution benefits or wildlife and biodiversity benefits, and

desired outcomes could include reducing the impacts of generation equipment manufacturing or operation, or restoring wildlife habitat. Figure 1 shows the most common supplier clean electricity procurement program goals according

Figure 1. Common Supplier Clean Electricity Procurement Program Goals



to respondents to our stakeholder survey.

**Companies should decide on other objectives and parameters for clean electricity generation and procurement in the supply chain, which could be related to or independent of the desired outcomes above.** These may include the following.

- Regulatory surplus: voluntary procurement of clean electricity generation that is surplus to that which is required by law or counted toward regulatory compliance.
- Procurement from new generation facilities, e.g., facilities that began commercial operation within a defined period of time relative to procurement.
- Geographic sourcing restrictions within a market.
- “Bundled” procurement of both energy and generation attributes.

- Local community engagement in clean electricity project development.
- Third-party certification of retail sales/ transactions, e.g., Green-e® certification.

Responses to the stakeholder survey indicate that geographic sourcing restrictions within a market (e.g., generation is located in the same grid region as supplier load) may be most popular among these objectives. They also indicate that all of these preferences may vary by supplier location since they are determined by market conditions and the procurement options available.

**In identifying desired outcomes and objectives for supplier procurement, companies should consider clean electricity procurement goals that have been or will be set for their own operations.** Responses to the stakeholder survey indicate that goals for supplier procurement are typically the same as a company’s own goals. However, goals for supplier procurement may be

different where a company has more experience and/or more ambitious or detailed goals for their own procurement (e.g., related to community benefits or new technologies); or based on where the suppliers are located, supplier access to clean electricity, other barriers to supplier clean electricity procurement, the contractual relationships between suppliers and the company, and data availability. Goals for Tier 2+ suppliers may be much less ambitious and detailed than a company's own goals due to gaps in data, less direct communication, and the degree of separation from a company's own operations.

In addition to the desired outcomes and objectives for clean electricity generation and procurement in the supply chain, **companies should identify objectives for the supplier procurement program itself.** These may include the following:

- Simplicity
- Rigor
- Impact
- Completeness
- Public perception/reception

These objectives will help determine the scope of the program, the way the program is implemented (see further below for options), and the resources that will be required for implementation. Responses to the stakeholder survey indicate that simplicity may be the most important among these objectives, followed by impact, rigor, and public perception, which were generally viewed as equally important.

**Companies should also set goals for these programs based on barriers/obstacles facing companies and suppliers. These barriers/obstacles should be used to define the scope and tailor the objectives of the program.** Barriers include the cost of clean electricity. Added cost

associated with clean electricity procurement may deter suppliers. Where the cost of required/preferred clean electricity options is lower, barriers are lower. Another potential barrier is the mismatch between the (perhaps longer-term) contract length for clean electricity projects and the (perhaps shorter-term) purchase order or relationship between companies and suppliers. This may represent a barrier to at least certain types of supplier procurement from certain projects (e.g., long-term direct agreements with large projects). Goals should be adjusted accordingly.

**Companies should tailor their goals to specific supplier markets (e.g., countries), to different groups of suppliers across markets, or determine a program scope (suppliers covered) based on a common set of relevant goals.**

Aspects of the market that affect the objectives and desired outcomes above and that should be used as general considerations for tailoring programs to specific markets are included in Table 5.

*Table 5. General Considerations for Tailoring Supplier Clean Electricity Program Goals to Specific Markets*

CONSIDERATION	DESCRIPTION
Market and regulatory structure	The way in which electricity is produced, sold, and delivered to customers and the way in which that is regulated. For example, regulated vs. restructured wholesale markets, bilateral vs. centralized/organized market trading, retail choice, etc.
Available clean electricity procurement options	The ways in which specified, clean electricity can be acquired or purchased by a customer. For example, self-generation (ownership or leasing arrangements), purchases from local utilities, competitive suppliers or community aggregation entities, directly from individual generators, or EAC marketers or trading platforms.
Policy landscape	The different policies and regulatory programs affecting delivery of and claims to specified power, e.g., presence of a FIT, RPS, etc.
Other market interactions	The way in which markets for other environmental commodities, and associated regulatory programs, affect clean electricity transactions and benefits. For example, markets for emissions allowances, carbon offsets, clean fuel credits, etc.
Stranded asset considerations	The degree to which different generation assets have been or could be devalued in a market, and the ways in which that devaluation or potential devaluation has affected, may affect, or has been or may be affected by project development and/or supplier procurement.
Resource availability and availability of clean electricity supply	The degree to which different clean electricity resources (e.g. wind and sun) are available, and the degree to which clean generation is currently available for voluntary procurement by suppliers in a particular region.
Constraints on clean electricity development	The degree to which resource limitations as well as siting, permitting, and other barriers are likely to affect clean electricity supply and cost in the future.
Administrative overhead to run a program for suppliers in the market	The estimated relative or total cost of engaging with suppliers and otherwise administering a supplier clean electricity program in a particular market based on individual supplier circumstances and the considerations above.
Cost competitiveness with standard offer electricity product	The cost difference for suppliers between clean or renewable and standard offer electricity.

Certain supplier markets may be especially difficult for clean electricity procurement and administration of a supplier clean electricity program based on the combination of factors in the areas above. Respondents to our stakeholder survey identified certain countries in Southeast Asia as relatively difficult markets for supplier clean electricity procurement, including (alphabetically) Bangladesh, Cambodia, China, India, Indonesia, Laos, South Korea, and Vietnam. According to survey respondents, these are places where many companies with supplier goals have Tier 1 suppliers with significant electrical loads but where there is not yet robust voluntary clean electricity procurement infrastructure, a confusing or complex procurement landscape, limited credible procurement options, limited supply of clean electricity that is available for voluntary procurement, other policy barriers to procurement, and/or utilities and other stakeholders that are not supportive of voluntary procurement. Goals for supplier procurement programs may be limited in these areas.

**Companies must determine whether their suppliers will procure clean electricity on their own behalf or if the company will procure on behalf of suppliers to meet initial goals under the program, either for certain suppliers, in certain markets, or consistently across the program.** While there is a spectrum of possible participation and support on the part of companies in and around supplier clean electricity transactions, there is nevertheless an important distinction between procurement by the company, in which the company is the entity engaging in clean electricity transactions, and procurement by suppliers, in which the supplier company is that entity. This determination will affect the overall level of supplier engagement needed to administer the program. **Companies should plan**

**at this stage for the level of supplier engagement needed to administer the initial program based on whether clean electricity will be procured by or on behalf of suppliers.**

Supplier procurement requires an understanding of their own emissions and available procurement options, the resources to procure on their own, and potentially a variety of other circumstances. Respondents to our stakeholder survey indicated that typically either suppliers purchase clean electricity on their own behalf or there is a combination of procurement by suppliers and by the company on behalf of suppliers. Reasons for why companies may choose to procure on behalf of suppliers, at least initially, include the following:

- The nature of contractual relationships, e.g., companies do not have direct commercial relationships with suppliers, or suppliers cannot be required to procure clean electricity as a condition of being a supplier.
- Cost of required/preferred clean electricity procurement options to suppliers.
- Suppliers have limited resources (e.g., funds, staff) and/or experience in procuring clean electricity in line with company goals.
- Lack of data, e.g., suppliers do not have or cannot share sufficient information about their clean energy procurement.
- Other supplier circumstances, e.g., landlord-tenant issues, where the supplier may not own or have control over their electricity use/purchasing.
- Companies want to execute purchases quickly, e.g., as an interim solution while they help educate suppliers on clean electricity procurement options or while suppliers explore those options.

- Purchasing on behalf of suppliers can be an effective way to address electricity use by Tier 2+ suppliers.

Finally, as a part of goal setting for supplier clean electricity procurement programs, **companies should decide how quickly to increase ambition, in terms of targets, impact, coverage or depth of supply chain, etc., as well as the potential for future expansion of programs beyond electricity.**





## Stage 5: Launch of Initial Supplier Clean Electricity Program

In preparation for full implementation of a supplier clean electricity program, companies may “soft” launch a program by providing suppliers with resources and strategies for reducing electricity consumption and information regarding the availability of existing clean electricity procurement instruments and options, for example. Alternatively, companies may begin engagement with suppliers regarding clean electricity procurement in parallel with the previous stages. This “groundwork” may be essential to effective implementation of a full supplier clean electricity program (Stage 6) and can involve outreach, education, and even project development. The U.S. Environmental Protection Agency (EPA) also recommends piloting supply chain initiatives with a handful of suppliers before scaling up programs.<sup>17</sup>

Many existing supply chain clean electricity assistance and support programs and resources focus primarily on supplier education, trainings, and enablement. One example is the Clean Energy Buyers Institute’s (CEBI’s) Clean Energy Procurement Academy, which has resources for both U.S. and international suppliers. SBTi’s 2023 supplier engagement

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<sup>17</sup> U.S. EPA. (Dec 2010). *Managing Supply Chain Greenhouse Gas Emissions: Lessons Learned for the Road Ahead*. Pg. 13-4. [https://www.epa.gov/sites/default/files/2015-07/documents/managing\\_supplychain\\_ghg.pdf](https://www.epa.gov/sites/default/files/2015-07/documents/managing_supplychain_ghg.pdf).

guidance<sup>18</sup> focuses on having suppliers set their own SBTi-aligned emissions targets within a five-year target timeframe. It provides guidance on establishing a supplier engagement team, checking the progress of supplier adoption of science-based targets, providing educational resources about science-based targets and their importance, providing hands-on training on how to calculate emissions, and communicating implementation activities and data to the company.

Companies are encouraged not to skip Stages 1-4 entirely—to carry out measurement of upstream electricity use and perform their own scoping and goal setting for supplier clean electricity procurement prior to or during supplier education and while beginning to facilitate project development and/or procurement deals with suppliers. Companies are also encouraged to continue to strengthen and formalize these activities toward implementation of a full supplier clean electricity program (Stage 6), with requirements for suppliers, reporting, verification, and recognition.

At this or any other stage, complementary policy advocacy, by both companies and suppliers, can be used to support the creation, expansion, and improvement of clean electricity procurement options and market infrastructure. Coordination with government affairs or policy teams would be helpful in this regard—particularly while procurement teams are small or resource-constrained—and/or structuring clean electricity procurement programs to include a policy component.

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18 Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: <https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf>

# Stage 6: Full Supplier Clean Electricity Program Implementation

To administer a clean electricity procurement program for the supply chain, **companies must set requirements or establish criteria for both electricity generation projects (or facilities) and clean electricity purchases (or transactions) to meet their procurement goals (“procurement criteria”).** Suppliers will procure clean electricity (or companies will on behalf of their suppliers) to meet these criteria and report those procurements for verification that these criteria have been met and program objectives have been achieved. The following Tables 6a/b through 10a/b include standardized criteria for supplier clean electricity projects and purchases and associated standardized verification metrics for each desired outcome category and individual outcome (from Table 4). So, Table 6a includes the criteria for both projects and purchases to achieve desired outcomes related to accountability, and Table 6b includes the verification metrics for accountability outcomes. Tables 7a and 7b, 8a and 8b, and so on, follow for the other desired outcome categories. **Companies should use the standardized criteria and metrics in the following Tables for their desired outcomes.**<sup>19</sup>

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<sup>19</sup> Companies may also use criteria or requirements for suppliers related to clean electricity that are not criteria for either supplier clean electricity projects or purchases. For example, companies may require or request that suppliers engage in advocacy for clean electricity policy, market expansion, or local procurement options, and track their progress. These criteria and potential verification metrics are, however, not included here.

Table 6a. Accountability Criteria

PROJECT/SUPPLY CRITERIA
Project location(s) in the same country as supplier load
Eligible clean resource type
Project(s) commercial operation or repowering date within the last 15 years
Generation is not used for or counted toward compliance with any law, regulation, or legal requirement
PURCHASE/TRANSACTION CRITERIA
Transaction or retirement of a legally enforceable EAC in a credible tracking system or legally enforceable contract for the fully aggregated attributes of the generation based on credible and accurate generation data
Exclusive clean electricity usage claim
Vintage of generation falls within a 21-month window that includes the year of supplier electricity consumption, the latter half of the previous year, and the first quarter of the following year
Third-party verification/certification of the sale/purchase, e.g., Green-e® certification

Table 6b. Accountability Verification Metrics

DESIRED OUTCOME	METRIC
Credible usage and scope 2 GHG emissions claims for suppliers	Percent clean electricity used in total or for a particular product or customer-allocated use  Reduction in supplier market-based scope 2 emissions (tons) over time

More information about these criteria can be found in RE100's 2016 *Making Credible Renewable Electricity Usage Claims*<sup>20</sup> and the GHG Protocol's 2015 *Scope 2 Guidance*<sup>21</sup>.

20 Braslawsky et al. (April 2016). *Making Credible Renewable Electricity Usage Claims*. Published by RE100. Available online at: <https://www.there100.org/sites/re100/files/2020-09/RE100%20Making%20Credible%20Claims.pdf>

21 Sotos, M. 2015. *GHG Protocol Scope 2 Guidance: An Amendment to the GHG Protocol Corporate Standard*. World Resources Institute. Available at: <https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance.pdf>

Table 7a. New Clean Electricity and Emissions Impact Criteria

PROJECT/SUPPLY CRITERIA
Project(s) not yet in operation or repowered at the time of supplier's initial engagement with the project
Project location(s) in a grid region with an annual marginal emissions rate that is greater than the national average marginal emissions rate
GHG emissions from the electricity sector or region where project(s) is located are not capped or otherwise regulated, or there is a policy mechanism in place to set aside and retire emissions allowances on behalf of voluntary renewable energy purchased by suppliers, or emissions allowances corresponding to the emissions avoided by generation at the project(s) may be independently procured and retired
Project(s) built, repowered, or directly financed by supplier
Project(s) directly associated with immediate or near-term fossil plant retirement, either physically, legally, contractually, or in some other verifiable way
New transmission has been created to serve the project(s)
Project(s) operates during seasonal or daily peaks, or during times of day when fewer renewable resources are operating
PURCHASE/TRANSACTION CRITERIA
Purchase term/contract length $\geq 1$ year
Active and voluntary purchasing by supplier (purchase does not include clean electricity delivered by mandate or included in a standard delivery product)
Transacted clean electricity is accompanied by emissions allowance retirement through a policy mechanism for voluntary renewable energy, or emissions allowances corresponding to the emissions avoided by transacted clean electricity generation are independently procured and retired, where applicable to project location(s)
Long-term purchase ( $\geq 10$ years) that enables project finance, development, or operation
Bundled procurement (purchase includes the energy with the attributes from a single facility)

Table 7b. New Clean Electricity and Emissions Impact Verification Metrics

DESIRED OUTCOME	METRIC
Provide demand to drive the development of clean electricity	Portion of clean electricity used that is surplus to regulation of either the generation or its environmental attributes (e.g. emissions) in the electricity sector
	Portion of clean electricity used from facilities that were not yet in operation or repowered at the time of Supplier’s initial engagement with the project
	Portion of clean electricity procured under long-term contracts (>= 10 years)
	Portion of clean electricity actively procured (as opposed to passively received by default or mandate)
	Change in market price of generation, storage, and/or transmission
Avoid grid emissions	Avoided grid emissions associated with procured clean electricity generation (tons)
Reduce global emissions	Annual tons reduced by the project beyond an emissions baseline
Directly enable/create new clean electricity capacity/supply	Clean electricity capacity installed that was directly financed by the Supplier (MW)
Grid transformation and clean electricity integration	Reduced curtailment (MWh)
	Amount of peak generation (MWh)
	Miles of new transmission
	Amount of storage capacity added (MW)

A standard or other method must be used to determine regulatory surplus, based on a registry or public data regarding generation or associated attributes counted toward compliance, and the standard or method used should be specified. A methodology must also be used or developed to determine and attribute a change in market price of generation, storage, or transmission to specific projects or transactions, as well as the data sources used. Companies should specify the standard and/or methodology and data sources used.

Avoided grid emissions should be calculated using marginal emissions data. Companies

should specify the data source and the calculation methodology, including whether it calculated short-term or long-term avoided grid emissions or both. For global emissions reductions, companies should specify what baseline was used, how it was calculated, and how project performance was assessed against the baseline. Alternatively, companies can specify a third-party standard or verification program that was used to verify global reductions from the project.

Tools or methodologies must be used or developed to estimate reduced curtailment associated with procured generation. Those

tools/methods should be transparent and use authoritative data sources. Similarly, tools or methods to identify peak periods must be used or developed in order to calculate peak

generation, and they must be market specific. They should also be transparent and use authoritative data sources.

Table 8a. Technology or Business Innovation Criteria

PROJECT/SUPPLY CRITERIA
Project technology(ies) is firm and/or dispatchable
Project resource or technology type(s) not common in the sector
Project(s) includes co-located battery storage
PURCHASE/TRANSACTION CRITERIA
Purchase/transaction type is among the first of its kind in the country/market or involved the creation of a new tracking or contracting method or market infrastructure
Purchase or product/supply option expands access to renewable energy beyond the supplier company
A new certification or consumer protection program was created to support the purchase/transaction

Table 8b. Technology or Business Innovation Verification Metrics

DESIRED OUTCOME	METRIC
Support new technologies	Number of new clean generation technologies
Strengthen clean electricity markets in country	Number of new market instruments, products, contracting methods, certification programs

Whether a resource or technology is “common in the sector” must be evaluated against a market-specific threshold, which should be specified and justified.

Table 9a. Community Benefits Criteria

PROJECT/SUPPLY CRITERIA
Project location(s) in the same grid region as Supplier load
Project(s) certified or validated under a standard, or otherwise recognized by non-governmental or governmental institutions for co-benefits including community, equity, justice and/or peace benefits
Project(s) located in (or displacing impacts in) disadvantaged, low-income, or fragile communities
Members of the local community are involved in the construction and/or operation of the project(s)
Members of the local community have an ownership stake in the project(s), or the project or supply portfolio provides direct economic benefits to the local surrounding community and/or to disadvantaged communities, and these benefits are monitored and verified
PURCHASE/TRANSACTION CRITERIA
Purchase and/or project development is executed with minority-owned or underserved businesses

Table 9b. Community Benefits Verification Metrics

DESIRED OUTCOME	METRIC
Local community health, equity, justice, and/or peace benefits	Number of projects located in disadvantaged communities
	Number of community-owned projects
	Number of local jobs created by projects
	Revenue generated for local communities by projects
	Avoided mortality and morbidity in neighboring communities attributable to projects
	Number of minority-owned or underserved businesses involved in transactions or projects

Community and social benefits may be the most difficult to assess. Tools must be used or developed to both identify disadvantaged communities and estimate jobs created, revenue generated, and avoided mortality/morbidity attributable to projects. Definitions of “disadvantaged” or a different term may vary by location and tools to identify communities should be calibrated to these differences and differences between countries. Tools to estimate local benefits should use authoritative data sources and be transparent in terms of the methodology used and the nature of the benefits measured (e.g., temporary vs. permanent jobs). Similarly, definitions of “minority-owned” or “underserved”

will also vary by location and companies should specify how they are defined in different places.

The criteria and metrics above may be supplemented for application in countries in which widespread poverty, corruption, and human rights abuses, for example, are persistent with criteria and metrics specifically relevant to those and other issues. Existing tools may be available to determine project location to maximize social benefits, including data from the World Bank’s Poverty and Inequality Platform (PIP),<sup>22</sup> Transparency International’s Corruption Perceptions Index,<sup>23</sup> and the United Nations Universal Human Rights Index.<sup>24</sup>

Table 10a. Economic and Energy Security Criteria

PROJECT/SUPPLY CRITERIA
Project(s) creates direct economic benefits for supplier (e.g., energy cost savings/hedge, price volatility risk reduction, etc.), and these benefits are monitored and verified over time
Project(s) located on a local microgrid with supplier or includes a local combined heat and power facility
Project(s) located in a region with significant imported electricity from fossil resources or fossil fuel imports for electricity generation

22 See <https://pip.worldbank.org/home>.

23 See <https://www.transparency.org/en/cpi/2022>.

24 See <https://uhri.ohchr.org/en/>.



Table 10b. Economic and Energy Security Verification Metrics

DESIRED OUTCOME	METRIC
Economic benefits for supplier companies	Annual cost savings
	Difference in electricity price standard deviation
Energy security, independence, reliability for suppliers or country	Avoided fuel deliveries/use in local communities

Companies should specify the methodology used to calculate avoided fuel use/deliveries and use authoritative data sources for those calculations.

Like the desired outcomes themselves, **companies should tailor procurement criteria to specific markets (e.g., countries) covered by the program based on the general considerations for tailoring in Table 5.** Procurement criteria are more detailed than procurement objectives. So, even where a desired outcome or objective may be appropriate for a particular market, not all of the procurement criteria corresponding to that outcome may be appropriate or applicable for that market. For example, while exclusive clean electricity usage claims are appropriate as a desired outcome for supplier procurement in China, and while the Chinese green electricity certificate (GEC) may represent a reliable tracking instrument, it may not be possible to verify that clean electricity generation is not double counted toward the Chinese quota program, due to a lack of coordination between the GEC system and the compliance system along with transparency issues and a number of other factors. This procurement criterion must be modified for the Chinese market to provide the greatest level of assurance possible while work to improve the tracking systems and coordination between systems continues.

Another example is ROC/Taiwan. While avoiding grid emissions may be an appropriate desired

outcome for clean electricity in Taiwan, locating projects in a grid region with an annual marginal emissions rate that is greater than the national average marginal emissions rate may not be an applicable procurement criterion for Taiwan. Taiwan is comprised of many islands and there is effectively one grid region for the main island. Installing new clean electricity on one of its small islands for operations on the main island would not necessarily create a significantly larger emissions impact. Locating projects in the same grid region as supplier load, to achieve community benefits, may also not be applicable for Taiwan for the same reason.

Finally, there may be significant challenges associated with obtaining data on clean electricity projects and procurement sufficient to use certain criteria above and demonstrate that they have been met. Suppliers may not have access to clean electricity project and product/transaction data and/or companies may not have access to this data even where suppliers do. Respondents to our stakeholder survey identified data access as the most significant challenge associated with establishing criteria for goals related to supplier clean electricity procurement. **Companies should also tailor criteria for procurement by specific suppliers or in specific markets based on access to data that is required and the quality of available data.** Companies may face similar challenges associated with obtaining data sufficient to use

certain verification metrics above. For example, curtailment, marginal emissions, and job creation data, among others, may not be available for certain regions. **Verification metrics should likewise be tailored based on access to data that is required and the quality of available data.**



# Supplier Clean Electricity Program Implementation Options

The previous sections of this guidance provide a set of common practices, objectives and outcomes, and procurement criteria and metrics to standardize supplier clean electricity programs. This section provides options to implement these programs with the understanding that all companies and supply chains are different. While it is helpful to measure the same things in the same way, it is not necessarily important that all programs be implemented and operated the same way in order to be effective. We provide options for program design, data collection, accounting (allocating and recording transactions), and verification.

## Program Design Options

It may not be possible for companies to require clean electricity procurement in the supply chain. Even where they can, it may not be possible or desirable to require that all procurement criteria be met.

Table 11. Program Design Options

DESIGN OPTION	DESCRIPTION
Required Criteria + Plan for Continuous Improvement	Company identifies a set of requirements for supplier clean electricity procurement (e.g., written into supplier agreement) (Required criteria) along with a requirement or expectation of “continuous improvement,” which could involve a work plan showing how procurement criteria in Preferred and Bonus categories will be met increasingly over time.
Required Criteria + Recognition Tiers	Company identifies requirements for supplier clean electricity procurement (minimum procurement requirements for suppliers) (Required criteria) along with other (Preferred and Bonus) procurement criteria in different tiers of recognition and/or benefits (e.g., silver, gold, and platinum tiers). Company creates rules for achieving each tier. For example, silver tier must meet Required criteria plus at least 3 silver level criteria; Gold tier must meet silver criteria plus at least 3 gold level criteria, and so on. Company decides on the benefits associated with each tier.
Required Criteria + Recognition Tiers with Scoring	Company identifies requirements for supplier clean electricity procurement (Required criteria) along with other (Preferred and Bonus) procurement criteria that are assigned a point value. Company identifies point total ranges for different tiers of recognition and/or benefits (e.g., silver, gold, and platinum tiers). For example, Preferred criteria are valued at 5 points and Bonus criteria are valued at 1 point. Company decides on the benefits associated with each tier.
Required Criteria + Incentives	Company identifies requirements for supplier clean electricity procurement (Required criteria) along with other (Preferred and Bonus) procurement criteria in tiers or with point values for total scores associated with certain incentives (rewards, discounts, preferences, etc.).

Companies can arrange selected procurement criteria (from Stage 6) into the following administrative categories:<sup>25</sup>

- Required
- Preferred
- Bonus

Just as the selection of program objectives and procurement criteria depends on market and

supplier circumstances, and they are tailored to specific markets and suppliers in Stages 4 and 6, the assignment of these different administrative categories does as well and should be repeated for each market in which procurement criteria are applied. There are therefore three stages of market customization/tailoring:

1. Selecting desired outcomes and objectives (Stage 4);

25 SBTi suggests similar categories for framing expectations to suppliers for setting and reporting science-based targets: as a requirement, expectation, or encouraged. Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Pg. 25. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

2. Selecting procurement criteria corresponding to desired outcomes and objectives (Stage 6); and
3. Assigning these administrative categories to the criteria.

Suppliers cannot be expected to procure clean electricity if it is not required or in a way that is not required. This represents a challenge to program effectiveness with respect to all procurement criteria in the preferred and bonus categories. Companies can choose from several potential program design options to address this challenge, including those in Table 11, which is not a comprehensive list.

Companies using these (or other) design options should clarify how the program is to be used by suppliers using multiple clean electricity supply options or projects and/or operating in multiple markets. For example, companies can require that these suppliers must meet Required criteria for each procurement option in each market. They then evaluate/score each supply option in each market. They calculate a weighted average score or evaluation based on the proportion of total applicable consumption (MWh) in each

market to determine their overall recognition tier for each market. See the example in Box 1. In addition, transparency into the evaluation of each supply option/project will be helpful for “continuous improvement.”

SBTi recommends categorizing supplier performance based on indicators of “supplier GHG program maturity,” including the status of GHG inventory, target-setting, and data reporting—for example, low, medium, and high maturity. Companies can translate this into a “supplier scorecard” with metrics to facilitate engagement, which can be used to hold suppliers accountable.<sup>26</sup> SBTi provides a list of supplier incentive mechanisms, including recognition, scorecards, benchmarking, benefits and penalties.<sup>27</sup>

Responses to the stakeholder survey indicate that few companies are employing recognition tiers, scorecards, or rewards programs at the moment. Rather, the majority of companies either have not yet reached the stage of full supplier procurement program implementation or simply provide suppliers with clean electricity procurement information, data collection forms, and educational resources.

### Example for Suppliers Using Multiple Clean Electricity Procurement Options

Supplier A in the U.S. using two supply options for 33% and 67% of its company-allocated load, respectively, achieves a score of 30 for the first supply option covering 33% of load and only meets minimum requirements for the second supply option (score = 0), would calculate  $0.33 \times 30 + 0.67 \times 0 = 10$ , which would qualify the supplier for the silver tier for the U.S. This weighted averaging would be different and less precise where scoring is not used.

26 Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

27 *Ibid.* Sec. 5.3.

## Data Collection and Supplier Reporting Options

We recommend that companies create and use data collection forms (or a secure online reporting platform) for both supplier electricity use and supplier clean electricity procurement. The latter should allow suppliers to report all required information needed to determine whether applicable procurement criteria have been met. All reporting methods should ensure data security and confidentiality.

Alternatively, other available supply chain data management tools (e.g., software) may be explored or adapted, particularly for large companies or institutions with complex supply chains. In addition, new tools and reporting frameworks for supply chain electricity use and procurement and/or emissions are being developed and may be available for certain sectors. These may help standardize data and reporting, at least for certain criteria. One example is a framework for reporting GHG emissions in the supply chain created by CDP and Vodafone for the telecom sector that Vodafone has linked to preferential supply chain financing rates.<sup>28</sup> SBTi recommends a supplier data collection solution to gather primary emissions data along with other Environmental, Social and Governance data and provides examples of existing standardized supplier data collection solutions.<sup>29</sup> These tools and reporting frameworks may be supplemented with data collection related to project and purchase criteria above that are not covered.

## Transactions and Accounting

This guidance is for companies establishing clean electricity procurement programs—what those programs should look like. There is also a need for clean electricity transaction and accounting rules—about how to carry out transactions to support those programs and what companies and suppliers should actually do to procure clean electricity, e.g., how to transact on behalf of suppliers/customers, record those transactions, and account for them. This guidance cannot fully produce those rules, which will be market-specific. Companies and suppliers should transact according to the rules of the market, tracking system, and certification standard rules available in the market. Identifying these rules is a part of Stage 3. They also depend on whether the procurement is by or on behalf of suppliers.

Companies and suppliers may use different approaches to allocate and record transactions of clean electricity and EACs in the supply chain. The U.S. EPA's May 2022 paper, *Renewable Electricity Procurement on Behalf of Others: A Corporate Reporting Guide*<sup>30</sup> provides guidance for allocating procured clean electricity to suppliers, where it is procured by companies on behalf of their suppliers, specifically for landlord-tenant circumstances in the U.S. This guidance may be adapted for other circumstances outside the U.S. Where suppliers are procuring clean electricity, they should allocate procured clean electricity to customer companies (products and services) consistently with how they have allocated

28 See [www.vodafone.com/news/corporate-and-financial/cdp-vodafone-join-forces-incentivise-supplier-sustainability](http://www.vodafone.com/news/corporate-and-financial/cdp-vodafone-join-forces-incentivise-supplier-sustainability).

29 Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Fig. 10, pg. 27. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

30 U.S. Environmental Protection Agency. May 2022. *Renewable Electricity Procurement on Behalf of Others: A Corporate Reporting Guide*. U.S. EPA Green Power Partnership. Available at: [www.epa.gov/system/files/documents/2022-05/renewable\\_electricity\\_procurement.pdf](http://www.epa.gov/system/files/documents/2022-05/renewable_electricity_procurement.pdf).

electricity use in Stage 1. See Stage 1 and Sec. 3.3 of the Scope 3 Background Report for more information. Companies may use or support the development of different tracking system functionalities, EAC product label requirements, or other audit frameworks that establish auditable links or tracking between supplier electricity use and procurement (and associated emissions in Scope 2) and customer company product use (and associated emissions in Scope 3).

Finally, companies and suppliers may record transactions, either in purchase documentation or in a tracking system, in a way that supports allocation of generation to suppliers and customer companies, respectively. Specific rules for this can be established by certification programs and standards in different markets or certain audit trail solutions or tools that may be available. But companies and suppliers can also create their own recording and accounting procedures to allocate generation to specific uses, for example, using EAC serial numbers and/or retirement accounts and reasons in tracking systems and by including serial numbers in supplier procurement data collection forms.

## Verification

Supplier clean electricity procurement and conformance with the selected procurement criteria should be verified. Verification requires procurement data from suppliers or procurement on behalf of suppliers as well as market data from other sources, e.g., tracking systems. For example, for procurement criteria related to accountability, there must be verification of exclusive retirement of EACs in a credible

tracking system or use of a legally enforceable contract for fully aggregated attributes that match the type and quantity of clean electricity purchased and reported. Verification of this and other procurement criteria may be performed internally by the company, externally by a contracted party, or externally by a third-party verification program (e.g., the Green-e® program), or a combination of these depending on what available verification programs cover. SBTi recommends that suppliers validate emissions targets with the SBTi,<sup>31</sup> which may cover a portion of objectives and criteria for a supplier clean electricity procurement program. Companies should compare the resources and costs associated with each of these options relative to the level of assurance and rigor that is desired for the program, where third-party verification is generally perceived as the most rigorous.

Companies may have similar options for verifying achievement of desired outcomes (i.e., metrics). While we are not aware of any existing third-party standards or verification programs for many of the verification metrics (e.g., related to the impact of procurement or projects) identified in Stage 6, such standards or internal verification protocols could be created for different markets using information in this guidance.

## Program Implementation Tools

Companies may create or use existing tools and mechanisms to support program implementation, including the following:

1. Educational resources for suppliers about clean electricity generation and procurement.

31 Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: <https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf>

2. Clean electricity project development or procurement funds. Companies can create funds for projects meeting preferred and bonus criteria and allow suppliers to source from the fund or projects supported by the fund. Some respondents to our stakeholder survey noted the use of project development of procurement funds created by companies for supplier procurement.
3. Joint or aggregated procurement tools<sup>32</sup>  
Companies can facilitate the aggregation of supplier load to both facilitate procurement and increase the impact of procurement.

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32 The aggregation process is generally described at: [www.greenbiz.com/article/aggregation-paves-way-more-diverse-corporate-renewables-market](http://www.greenbiz.com/article/aggregation-paves-way-more-diverse-corporate-renewables-market).



# Appendix A

## Supplier Clean Electricity Procurement Checklist

This checklist identifies some of the key action items for developing programs that increase clean electricity use in upstream supply chains from the *CEAP Guidance for Supplier Clean Electricity Procurement*. Action items are organized into the six program design stages included in the guidance. Organizations are encouraged to begin their planning in the stage that best reflects their own circumstances. Additional context and resources can be found in the guidance.

### STAGE 1 Measurement of Supplier Electricity Use

- Collect Tier 1<sup>1</sup> supplier electricity use data associated with company products or services.

#### BEST PRACTICES:

- Prioritize collection of primary electricity use data supported by electricity bills or meter data to the extent possible.
- Estimated or proxy electricity use data may be used when primary data are not available.
- Favor source-specific usage data, then facility-specific, followed by supplier-specific data.
- Utilize data that is measured on at least an annual basis.
- Strive for no more than a one-year delay between the data and the relevant electricity consuming activity.

- Allocate Tier 1 supplier electricity use to a company's products or services.

#### BEST PRACTICES:

- Allocate electricity use as precisely as possible to relevant products and services.
- Although allocation methods can vary, strive for consistency across the supply chain, or at least within certain markets and industries.

- Develop methods for estimating electricity usage for Tier 2+ suppliers.

#### BEST PRACTICES:

- Where possible, begin engaging with Tier 2+ suppliers about electricity use practices and trends.
- Utilize available data modeling tools to gain visibility deeper into supply chains and to identify and estimate emission-intensive priority areas.

<sup>1</sup> A Tier 1 supplier provides products or services directly to the company, whereas Tier 2 suppliers provide products or services to a Tier 1 supplier.

## STAGE 2 Measurement of GHG Emissions Associated with Suppliers' Purchased Electricity.

- Identify emissions factor data sources for Tier 1 suppliers (and other tiers of suppliers where possible).

### BEST PRACTICES:

- Ensure data are provided by authoritative and reliable sources and meet credibility criteria.<sup>2</sup>
- Use verified data where available.
- Select data built on transparent calculation methodologies that are the most precise and transparent.
- Prioritize recent and frequently updated data that represents a time period that closely matches that of the electricity usage data.
- Accounting for multiple GHGs is preferred (e.g., CO<sub>2</sub>e vs. CO<sub>2</sub> only).

## STAGE 3 Supplier Clean Electricity Procurement and Transaction Analysis

- Seek or conduct analysis of electricity market structure and electricity procurement options and costs where Tier 1 suppliers are located.

### BEST PRACTICES:

- Evaluate wholesale and retail market structure to better understand electricity procurement options and partners.
- Consider laws and regulatory framework affecting the electricity sector, opportunities

for specified electricity procurement, and retail use claims.

- Look to existing regulatory and voluntary programs that may affect or are available to support procurement of specified power.
  - Identify existing clean electricity market infrastructure, e.g., certificates and tracking systems.
  - Map out the market-specific options available to suppliers or the company to procure specified electricity and/or attributes.
  - Consider interactions with other environmental markets (e.g., emissions trading), carbon border taxes or other carbon value transfers.
- Defer to regional standards for electricity products and procurement where they exist.

### BEST PRACTICES:

- Verify that standards are developed through open and transparent processes and involve this level of in-depth market analysis, e.g., as with a regional Green-e® Renewable Energy Standard.
- Where regional standards do not exist, look for relevant information from organizations or initiatives such as the Clean Energy Buyers Association (CEBA) and the RE100 Initiative.<sup>3</sup>

2 CRS. March 2021. *Accounting for Standard Delivery Renewable Energy*. Clean Energy Accounting Project. Center for Resource Solutions. Pg. 4–6. Available at: [resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf](https://resource-solutions.org/wp-content/uploads/2021/03/Accounting-for-Standard-Delivery-Renewable-Energy.pdf).

3 See the RE100 Publications page for more information: [www.there100.org/our-publications](https://www.there100.org/our-publications).

## STAGE 4 Supplier Clean Electricity Procurement Goal Setting

- Identify the portion of the supply chain covered by the initial program and for which clean electricity goals are to be set.

### BEST PRACTICES:

- Align with scoping strategies recommended for scope 3 emission reduction targets, such as the Science Based Targets Initiative's (SBTi's) recommendation to use a scope 3 screening and inventory process.<sup>4</sup>
- Identify the geographic scope and markets covered by the initial program (e.g., global or only certain countries).

- Define desired electricity generation resources.

### BEST PRACTICES:

- Determine if the program will be for renewable or clean generation (or both), or if there are preferences or limitations for specific resource-types such as solar, biomass or nuclear.
- Evaluate if it is a priority for the program to be consistent with the company's clean electricity procurement goals for its own operations.

- Identify the desired outcomes of clean electricity generation and procurement in the supply chain that the company seeks to achieve and measure.

### BEST PRACTICES:

- See **Table 4** in the guidance for a list of common supplier clean electricity procurement program outcomes including accountability, new clean electricity and emissions impact, and technology or business innovations.
  - Consider other potential desired outcomes that align with company priorities, such as reducing the impacts of generation equipment manufacturing or operation or restoring wildlife habitat.
- Select any additional parameters for clean electricity generation and procurement in the supply chain.

### BEST PRACTICES:

- Parameters could be related to or independent of identified desired outcomes.
- Parameters may vary by supplier location, as they are determined by market conditions and the procurement options available.
- Common parameters include local sourcing, regulatory surplus<sup>5</sup>, new generation facilities, bundled procurement of both energy and generation attributes, local community engagement, and third-party certification.
- Consider clean electricity procurement goals that have been or will be set for the company's own operations.

<sup>4</sup> See Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

<sup>5</sup> "Regulatory surplus" means voluntary procurement of clean electricity generation that is surplus to that which is required by law or counted toward regulatory compliance.

- Identify operational objectives for the supplier procurement program itself.

## BEST PRACTICES:

- Operational objectives may include simplicity, rigor, impact, completeness, and public perception/reception.
- Consider the resources necessary to achieve each operational objective to understand what is likely achievable.

- Consider the barriers and obstacles facing companies and suppliers when defining the scope and objectives of the program.

## BEST PRACTICES:

- Understand the costs associated with clean electricity procurement where suppliers operate.
- Recognize any potential mismatch between the contract length for clean electricity projects and the timing of a purchase order or supplier relationship.

- Tailor program goals to specific markets.

## BEST PRACTICES:

- Consider relevant aspects of the markets where suppliers operate (see **Table 5** for a general list).
- Design variation in your program for each market (e.g., country), across markets with sufficient alignment, or determine a program scope (suppliers covered) based on a common set of relevant goals.
- Recognize that goals may be limited in areas lacking robust voluntary clean electricity procurement infrastructure.

- Identify whether the company or the suppliers will be procuring clean electricity to meet initial goals under the program.

## BEST PRACTICES:

- Define whether an approach will apply for certain suppliers, in certain markets, or consistently across the program.

- Determine the level of supplier engagement needed to administer the initial program.

## BEST PRACTICES:

- Consider whether clean electricity will be procured by or on behalf of suppliers. Supplier procurement may necessitate greater supplier engagement.
- If prioritizing supplier procurement, identify opportunities to help suppliers understand of their own emissions and available procurement options, and explore innovative approaches to increase a supplier's procurement resources.
- Purchasing on behalf of suppliers can be an effective way to overcome a number of practical challenges faced by suppliers or caused by the nature of the supplier/client relationship. It also is a primary opportunity for addressing electricity use by Tier 2+ suppliers.

- Decide how quickly to increase ambition beyond an initial program design.

## BEST PRACTICES:

- Explore opportunities to expand targets, impact, coverage, or depth of supply chain, etc., as well as the potential for future expansion of programs beyond electricity.

### STAGE 5 Launch of Initial Supplier Clean Electricity Program

- Develop a strategy for initiating supplier engagement.

**BEST PRACTICES:**

- Provide suppliers with resources and strategies for reducing electricity consumption and information regarding the availability of existing clean electricity procurement instruments and options.
- Pilot supply chain initiatives with a handful of suppliers before scaling up programs.
- Focus on supplier education, trainings, and enablement.
- Encourage suppliers to set SBTi-aligned emissions targets in accordance with SBTi's 2023 supplier engagement guidance.<sup>6</sup>
- Initiate complementary policy advocacy with or on behalf of suppliers, to support the creation, expansion, and improvement of clean electricity procurement options and market infrastructure.

### STAGE 6 Full Supplier Clean Electricity Program Implementation

- Set requirements or establish criteria for both electricity generation projects (or facilities) and clean electricity purchases (or transactions).

**BEST PRACTICES:**

- Use standardized criteria for supplier clean electricity projects and purchases and

associated standardized verification metrics for the corresponding desired outcomes in **Tables 6a/b through 10a/b** in the guidance.

- Ensure access to required data and use or develop methodologies that accurately capture criteria and metrics.
- Tailor supplier procurement criteria and metrics to specific markets, supplier circumstances, and data challenges.
- Consider additional criteria or requirements for suppliers related to clean electricity that are not based on supplier clean electricity projects or purchases (e.g., increased advocacy for clean electricity policy, market expansion, or local procurement options).

### Supplier Clean Electricity Program Implementation Options

- Arrange selected procurement criteria (from Stage 6) into administrative categories (required, preferred, and bonus).

**BEST PRACTICES:**

- Assign administrative categories based on market and supplier circumstances for each market in which procurement criteria are applied.
- Provide direction to suppliers on how the program will be applied to suppliers using multiple clean electricity supply options or projects and/or operating in multiple markets.

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<sup>6</sup> Science Based Targets Initiative (SBTi). May 2023. *Engaging Supply Chains on the Decarbonization Journey: A Guide to Developing and Achieving Scope 3 Supplier Engagement Targets*, Version 1.0. Available at: [sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf](https://sciencebasedtargets.org/resources/files/Supplier-Engagement-Guidance.pdf)

- Include design options that encourage suppliers to procure clean electricity consistent with criteria in the preferred and bonus categories.

## BEST PRACTICES:

- Options include plans for continuous improvement, recognition tiers, scoring, and direct incentives. See **Table 11** for more information.

- Create and use data collection forms (or a secure online reporting platform) for both supplier electricity use and supplier clean electricity procurement.

## BEST PRACTICES:

- Data collection tools should allow suppliers to report all required information needed to determine whether applicable procurement criteria have been met.
- Existing supply chain data management tools (e.g., software) may be explored or adapted, particularly for large companies or institutions with complex supply chains.
- All reporting methods should ensure data security and confidentiality.

- Transact and account for clean electricity according to the rules of the market, tracking system, and certification standard rules available in the market.

## BEST PRACTICES:

- Where suppliers are procuring clean electricity, they should allocate procured clean electricity to customer companies consistently with how they have allocated electricity use in **Stage 1**.

- Use tracking system functionalities, EAC product label requirements, or other frameworks that establish auditable links or tracking between supplier electricity use and procurement (and associated emissions in Scope 2) and customer company product use (and associated emissions in Scope 3).
- Record transactions, either in purchase documentation or in a tracking system, in a way that supports allocation of generation to suppliers and customer companies.

- Verify supplier clean electricity procurement and conformance with the selected procurement criteria.

## BEST PRACTICES:

- Ensure that the scope of verification includes procurement data from suppliers or procurement on behalf of suppliers as well as market data from other sources, (e.g., tracking systems).
- Verification may be performed internally by the company, externally by a contracted party, or externally by a third-party verification program (e.g., the Green-e® program), or a combination of these.
- Validate emissions targets with the SBTi. This may also cover a portion of objectives and criteria for a supplier clean electricity procurement program.

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