



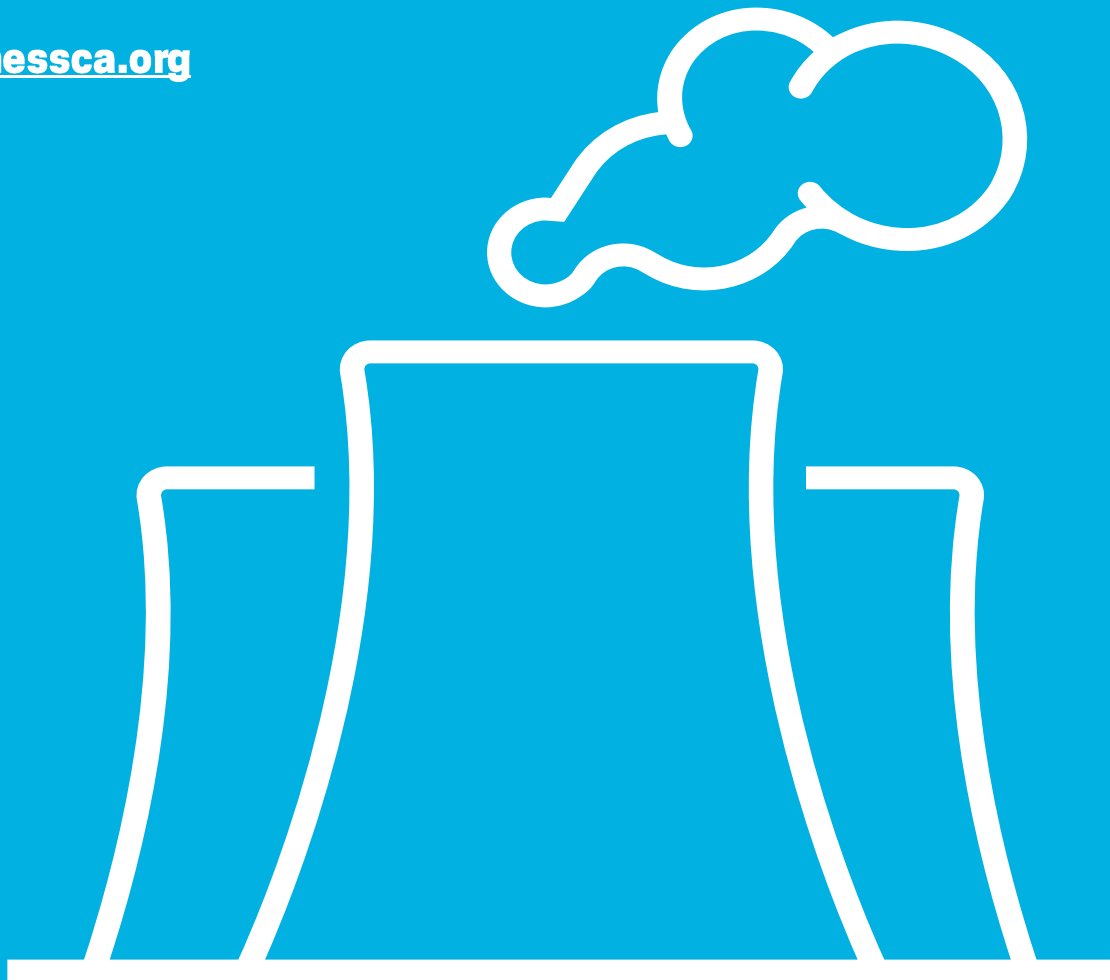
SUSTAINABLE SUPPLY CHAIN ALLIANCE

CARBON EMISSIONS AND ENERGY MANAGEMENT QUICK START GUIDE

SSCA Guidance for Electric Utility Supply Chain Professionals

September 2023

www.thessca.org



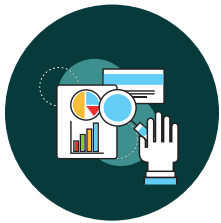
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WHY IS THIS IMPORTANT?



01 — New Regulatory Frameworks

Heeding warnings of a warming planet, the Biden Administration has committed to [a carbon-free power system by 2035](#), which directly affects utility companies' operations in the future. As action spreads, California and the EU have put [restrictions on the use of SF₆](#) (a component in many switchgears) due to climate risks, with California pledging to completely phase out SF₆ by 2025. This has the potential to become a higher priority for other states and regulating entities in the future. To avoid the most harmful impacts of climate change, the IPCC states that we must reach Net Zero emissions of our total global emissions by 2050 at the latest, which is the guiding framework for [SBTi](#) and the target to keep the world under a 1.5°C increase.



02 — Increased Investor Scrutiny

Investors are becoming increasingly concerned with the impact of greenhouse gas emissions from utilities and are looking for strong commitments to greening of the grid. Responsible energy management and managing carbon emissions are trends in the market that will ultimately restructure the top priorities of businesses. The potential for value creation in this sphere is high, thus investors stay informed regarding these issues.



03 — Reputational, Financial, and Operational Risk

There are risks associated with companies not addressing their carbon emissions and energy management strategies. Financial risk is one of the largest in that companies may forgo future earnings and access to capital when they do not address these issues. Reputationally, investors and consumers reward organizations that practice transparency. Companies can attract clients, investors, and partners when they address climate change through carbon emissions, thus mitigating reputational risk. Operationally, risks associated with not reducing carbon emissions stem from the allocation of resources and how a changing climate affects sourcing locations.

WHERE SHOULD YOU START?

Carbon emissions and energy management can be a daunting goal to take on, but experts suggest starting by creating an energy management program. The first step in [this guide](#) to build out this type of program is to identify gaps, which can be done using resources such as the [EPA](#). Companies should also be assessing their carbon hotspots and determining the most material emitters to start with. When looking at reducing carbon emissions, it is helpful to understand where most of the organization's emissions are coming from by using a tool like a [Carbon Footprint Calculator](#).

ORGANIZATIONAL RISK MANAGEMENT PRACTICES



Emission Reduction Goals

- To stay ahead of increasing regulation and display a commitment to reducing emissions, consider setting an [Emission Reduction Goal](#)
- These goals should align with targets set by organizations like [SBT](#) or the [Biden Administration](#)
- To guide reduction efforts, these goals should have achievable timeframes and milestones to complete



Carbon Management Strategy

- Consider implementing a [Climate Transition Plan](#), a time-bound plan of action meant to outline how organizations will stand by their reduction goals
- Assess the carbon footprint of your organization in order to gain alignment in reduction targets as well as strategies
- Reduction strategies include transitioning to a higher renewable energy portfolio, updating infrastructure, and more



Energy Efficiency Programs

- Implementing [demand response programs](#) and incentivizing energy savings
- Offering [Low-Income Energy Efficiency](#) programs to promote affordable, cleaner energy

ON THE HORIZON: SCOPE 3 MANDATORY DISCLOSURES



- In March of 2022, the SEC proposed [a new measure](#) that would require U.S. publicly listed companies to report detailed disclosures on:
 - Climate risks and opportunities
 - GHG emissions and third-party assurance
 - Climate goals and targets (if any)
 - Governance
- Although the final ruling has been delayed, preparing for it would be within best practices to ensure compliance within the possible ruling
- The anticipated high-level requirements for GHG emissions include:
 - Mandatory disclosure of Scope 1&2 GHG emissions for all companies
 - Disclosure of Scope 3 GHG emissions if material, or if the registrant has set an emission reduction target or goal that includes Scope 3
 - Must disclose the methodology used to calculate emissions
 - Registrant's climate-related targets or goals, and transition plan, if any
 - Mandatory third-part assurance of Scope 1&2 at the Limited Assurance level, escalating to Reasonable Assurance in the future

Key Purchasing Practices

1

Assess whether the company actively works to reduce emissions through their targets or other commitments and reports on their progress. Disclosing this data ensures the target stays within reach and signals to utilities that suppliers are working toward meeting their goals, which often helps utilities meet their own sustainability goals.

2

Supplier engagement should be a priority to utilities when determining their purchasing agreements. Collaboration should center on the priorities of both the utility and supplier to identify any gaps or easy fixes in the sustainability program. Utilities should also consider the state of the [Sustainable Sourcing Policy](#) and if they can assist with revisions or implementation.

3

[Utilities should identify the carbon footprint](#) of the suppliers within their value chain to determine who is a high emitter and in what categories reduction could be most impactful. Incentivizing the reduction of emissions and promoting suppliers that actively engage with this data and its reduction will ultimately lead to a decrease in emissions for the utility.

Sample RFx Questions

1. Does the company assess their GHG emissions? Are there any goals or targets in place to reduce Scope 1 and Scope 2 emissions?
2. Does your company currently have any targets in place for Scope 3 emissions?
3. What steps does your company take to reduce carbon emissions in the transportation and packaging of products and/or services?
4. Does your company utilize electric vehicles? Are there plans to transition to an electric fleet?
5. Does your company have any energy efficiency initiatives? How does your company implement effective energy management?

These sample RFx questions can be used however you see fit, including conversationally in engagements with suppliers.

NOTABLE UTILITY SC CONCERNS



USE OF SF₆ IN UTILITY MATERIALS



- One emerging risk to be wary of in the future is the use of SF₆ in materials used to supply utilities. When making purchasing decisions, it will be important to ask what your alternatives are, some of which are outlined [here](#).
- Byproducts from SF₆ can be harmful to human and environmental health. Different concentrations can formulate different severity of reactions.
- Electric utilities are one of the largest users of SF₆ in their equipment. Utilities can decrease emissions and other issues caused by SF₆ through mechanisms such as:
 - Leak Detection and Repair
 - Use of Recycling Equipment
 - Employee Education/ Training



ALTERNATIVE ENERGY CONSIDERATIONS

Integrating renewable energy into the supply chain requires investments in infrastructure, technology, and more.

Resource Availability and Geographic Considerations



- Carefully compare renewable energy option, like wind and solar, before implementation. While wind might emit less carbon emissions overall, there may be areas more suited for solar (for example, places with more sun exposure), and some more suited for wind.
- Geographically, solar thrives across the South and Southwest regions of the United States. When considering locations best suited for wind energy, the Midwest offers advantages due to the intensity of the wind and availability of less dense population areas.
- At a large-scale, utility level, both wind and solar are technically feasible and economically viable. NREL's PWatts Calculator helps measure performance for solar and NREL Tools covers wind.

Economic Considerations



- Comparing the cost of solar to wind is not a one for one comparison due to factors such as installation costs, energy outputs, tax credits, maintenance costs, and more.
- Some utilities are already employing choice programs for their consumers where they choose how much, if any, of their energy comes from renewable sources. PG&E's model includes an option to purchase solar power.
- It is key that as utilities and their suppliers begin moving away from traditional forms of power generation and into renewables, they give attention to workers and the community. A just and equitable transition can be achieved through re-skilling opportunities, educational advancements, and investments in disproportionately affected communities.

General Considerations

- Renewable energy, like wind and solar, is non-dispatchable. While storage capability is still evolving, it will play a large role in decarbonization and increasing the implementation of renewable energy.



TOOLS AND RESOURCES



SSCA
Resources

- [GHG Training Series](#)



01

Frameworks

- [Greenhouse Gas Protocol](#)
- [SBT](#)
- [Sendai Framework for Disaster Risk Reduction](#)

Tools and Resources

- [Adaptation & Resiliency](#)
- [Alternative Fuels Data Center](#)
- [Benefits of a Low Carbon Future](#)
- [Climate Change Risk Management](#)
- [Climate Transition Plan](#)
- [Climate Transition Plan- CDP](#)
- [Corporate Carbon Footprint- A Guide](#)
- [Electric Vehicles Benefits and Considerations](#)
- [Emission Reduction Goals](#)
- [Energy Program Assessment Matrix](#)
- [GHG Carbon Footprint](#)
- [Grid Switchgear uses Sulfur Hexafluoride](#)
- [Just & Equitable Transition](#)
- [Low-Carbon Solar RFP Guide](#)
- [Mitigating Carbon Emissions](#)
- [NREL PVWatts Calculator](#)
- [NREL Tools](#)
- [Operational Risks from Climate Change](#)
- [PG&E Consumer Choice Model](#)
- [Sustainable Sourcing Policy](#)
- [Sustainable Procurement Key to Lowering Carbon Footprint](#)
- [7 Ways to Reduce Carbon Emissions](#)

Regulations and
Further Information

- [Byproducts of Sulfur Hexafluoride](#)
- [Carbon Management Plan](#)
- [Climate Change Mitigation](#)
- [Demand Response](#)
- [Enhancement and Standardization of Climate-Related Disclosures](#)
- [Investment Expectations of Electric Utility Companies Looking Down the Line at Carbon Asset Risk](#)
- [Localized Supply Chain Benefits](#)
- [Low-Income Energy Efficiency Programs](#)
- [Regulations for SF6](#)
- [Solar Energy Considerations](#)
- [The Biden Administration](#)
- [Utility Decarbonization Techniques](#)
- [Wind Energy Considerations](#)
- [Wind and Solar Economic Considerations](#)



03

02

