

Greenhouse gas (GHG) emissions reduction audits have gained traction in the industry in the last five years, and auditing consultants are just beginning to transition from energy audits to decarbonization audits. As part of the Better Climate Challenge, DOE hosted a **GHG Emission Reduction Audits and Assessments** Working Group from 2023 to 2024 to understand the latest about procuring and implementing decarbonization audits and assessments.

Over the course of six sessions, more than 50 Better Climate Challenge partners and allies from 40 organizations shared insights about executing audits at buildings in their portfolios, reviewing the measures identified in the audits, and implementing the audit results. The working group determined essential and optional scope elements for inclusion in GHG emissions reduction audits.

KEY TAKEAWAYS

- ▶ The working group's collaboration and discussions led to the development of DOE's [GHG Emissions Reduction Audit Scope of Work Template](#), published April 2024. The template includes essential and optional components partners can consider including in their decarbonization audit scope.
- ▶ The working group shared their experiences moving from energy audits to more comprehensive GHG emissions reduction audits (or "decarbonization audits"). Decarbonization audits have a longer time horizon of analysis than traditional energy audits, often phasing measure recommendations over 10-20 years to achieve long-term emissions reduction targets.
- ▶ The main technical differences between an energy audit and a decarbonization audit are the inclusion of electrification measures, on-site renewable energy and storage, and refrigerant emissions reduction measures.

Technical experts broke down potential audit components based on partner contributions and market research, then led interactive breakout sessions with partners to gather feedback.

Utilizing feedback from the working group, a GHG Emissions Reduction Audit Scope of Work Template was created. This resource (in Word document format) provides standardized language for use when specifying a decarbonization audit, including energy efficiency, electrification, renewables, and fugitive emissions reduction measures.

The GHG Emissions Reduction Audit Scope of Work builds on these prior Better Climate Challenge technical publications:

- ▶ [GHG Emissions Reduction Audits: A Checklist for Owners \(June 2023\)](#)
- ▶ [Framework for GHG Emissions Reduction Planning: Building Portfolios \(February 2023\)](#)

Discussion Topics and Outcomes

The working group brought together partners to discuss strategies and lessons learned as they prepared to assess and audit their building portfolios. Valuable insights emerged around planning strategies, desired outcomes, implementation, and financing. These discussions helped partners understand approaches that can lead to a more effective audit and implementation strategy.

Working group outcomes are summarized below:

▶ **Transitioning from Energy to Decarbonization Audits**

Many partners are shifting from a focus solely on energy efficiency to GHG reduction or decarbonization goals. Partners discussed barriers to procuring GHG emissions reduction audits such as difficulty finding an auditor with decarbonization experience that can recommend efficient electrification measures phased over time. Implementation barriers included challenges in obtaining funding to implement measures and gaining buy-in from stakeholders who are accustomed to traditional energy efficiency measures. To overcome barriers, partners are using data to help identify opportunities, timing audits to coincide with capital plans and equipment lifecycle, and exploring funding options (including grants and incentives).

▶ **Audit Scoping and Request for Proposals (RFP) Development**

Working group partners shared their current approach to audits, ranging from energy audits to decarbonization audits, and how they are planning for system retrofits. A key resulting recommendation was to develop standards during the RFP stage and recommended questions for the interview stage to encourage more comparable proposals from auditors. Partners explored strategies and best practices to prepare for, solicit, and select an audit firm. Discussions helped the project team finalize the elements of an effective GHG emissions reduction audit scope.

▶ **Implementing Audit Results**

Discussions centered around decarbonization audit strategies helped partners identify effective ways to implement audit results. Partners shared that lighting and heat pump projects were the most common emissions reduction measures resulting from decarbonization and energy audits.

▶ **GHG Emissions Reduction Audit Scope of Work Resource**

Feedback collected from the working group was used to develop a new DOE resource: the GHG Audit Scope of Work Template. This resource is the first of its kind nationally. Partners were able to review the template and provide input to influence the final product.

Partner Highlights

Active participation and support from partner and ally organizations was instrumental in advancing the goals of the GHG Emissions Reduction Audits and Assessments Working Group. ASHRAE, a Better Climate Challenge ally, reviewed the resulting Scope of Work resource to ensure alignment with existing and future ASHRAE Standard 211 decarbonization resources. All working group members contributed to informal breakout discussions, and the following organizations formally presented their emissions reduction planning approaches:

- ▶ **LaSalle Investment Management:** Aligned its net zero carbon initiative with capital plans and asset investments to drive value and manage risk.
- ▶ **Columbia Association:** Evaluated decarbonization audit strategies at the facility and portfolio level for effective implementation.
- ▶ **Centersquare:** Focused on the RFP process and evaluated firms to select an auditor in alignment with ESG, operations, and other goals.
- ▶ **Lendlease:** Provided best practices for obtaining useful decarbonization audits.
- ▶ **BXP:** Shared an RFP example for Energy and Carbon Reduction Opportunity Assessment.

These partner highlights reflect the active engagement and contributions from organizations across a range of sectors.

Follow-Up Activities

The GHG Audit SOW Template developed by the GHG Emission Reduction Audits and Assessments Working Group was presented at the [2024 Better Buildings, Better Plants Summit](#). Decarbonization audit reports will continue to be reviewed by the Better Climate Challenge technical assistance team during technical assistance meetings with partners, and feedback will be gathered on the use of the template.

Summary

The GHG Emission Reduction Audits and Assessments Working Group was successful in fostering goal-oriented discussion and guiding a new resource, GHG Audit Scope of Work Template, published by DOE in April 2024. This resource builds on prior resources and fills an industry gap for specifying building-level decarbonization audits. The support and involvement of partners was essential in advancing the collective understanding and implementation of effective emissions reduction auditing strategies.