



THE DECARBONIZATION ROADMAP

How Can We Meet Executive Order 14057?

“Give me six hours to chop down a tree, and I will spend the first four sharpening the ax.”

— Abraham Lincoln

As articulated in Executive Order 14057: “As the single largest landowner, energy consumer, and employer in the Nation, the Federal Government can catalyze private sector investment and expand the economy and American industry by transforming how we build, buy, and manage electricity, vehicles, buildings, and other operations to be clean and sustainable.”

For federal buildings to meet the benchmarks set forth in Executive Order 14057—on schedule and within budget—teams must be equipped for success from the outset, and that means a unique, actionable plan for every portfolio of building stock within the entirety of the federal government’s holdings. Transforming your building inventory requires a strategic approach that engages architectural and engineering teams from the outset. Here’s a step-by-step guide on how to effectively involve these teams to achieve your net-zero goals:

STEP 1: CLARIFYING THE VISION

Begin by assembling your leadership team. This team will spearhead the alignment of goals and ensure effective communication throughout your organization. This will be a wide-ranging team, including the building operators, key users, and the owner or an empowered owner’s representative who can make decisions impacting scope, schedule and budget.

Embrace the transformative journey outlined in Executive Order 14057 by revisiting your department’s bridging documents and refining the language within your RFQs and RFPs. Craft a narrative that resonates with potential partners, setting clear expectations and priming them for success. If you’re not clearly stating in the RFP that you have a sustainability requirement for your project, building and campus, then the work won’t get done.

Rebuilding bridging documents entails eliminating outdated practices and ensuring alignment with the net-zero objectives. Consider finding a partner to assist with researching financial incentives to support the teams providing high-performance design during the project’s concept phase, bearing in mind that 179D and 45L were extended in the Inflation Reduction Act and can help offset design costs.



STEP 2: IDENTIFY THE BENCHMARKS THAT ELIMINATE WASTE

A skilled AE partner with sustainable design experience can point you in the right direction regarding which of these steps is essential for a campus or organization of your scale, but a combination of the following will become a detailed roadmap of next steps.

- Benchmark your energy bills. You can roughly examine how far you are from meeting 65% reduction without energy modeling by checking the energy star portfolio to see whether your building operates in an efficient manner.
- Conduct a comprehensive inventory examination and energy study of your building stock to understand current conditions and identify areas for improvement. This level of detail can help you understand a roadmap for making incremental, but potentially faster and cheaper, progress. Prioritize projects that offer the most significant gains in energy efficiency, facilitating progress towards net-zero emissions by 2040.
- Encourage departments and organizations to establish robust inventory processes if lacking and adopt comprehensive energy study approaches to inform decision-making effectively.
- Engage in early-stage energy modeling to optimize building performance and identify efficient design solutions.
- Combine energy modeling with Life Cycle Cost Analysis (LCCA) to select systems with the lowest life cycle costs.

Pulling together the options above, or a combination of a few of them, will create a clear path to prioritizing needs, projects, and a potential timeline for implementation because your global leadership team will finally have a clear picture of operational and embodied carbon and points for greatest reduction.

STEP 3: ELECTRIFICATION IS COMPULSORY

Transitioning to fully electric buildings powered by renewable generation is essential to achieving the maximum greenhouse gas emission reduction. On-site generation via photovoltaics or wind is ideal; there is no doubt about the provenance of the source. For projects that cannot meet 100% of their generation need through on-site renewables there are off-site options, but they are not all equal. Dedicated off-site renewables either directly owned by the project or purchased as a share of a community (or wind) cooperative are the best fully authentic means to ensure emissions avoidance. Owners should be wary of REC’s and other purchased “off-sets” as the regulation landscape is complex and full of potential missteps. This is also true of carbon offsets. To truly off-set GHG emissions from fossil fuels a purchased offset would need to be part of a carbon capture of GHG removal system, and those are only just now starting to come online and are not yet regulated.

Through communication and collaboration with a strong AE partner, federal agencies and campuses can embrace renewable energy, energy-efficient technologies, and drastically reduce their carbon footprints. If you’re interested in benchmarking, inventory examination, energy modeling or Life Cycle Cost Analysis services for your building, campus, or portfolio, HED’s team of national experts are positioned to assist.