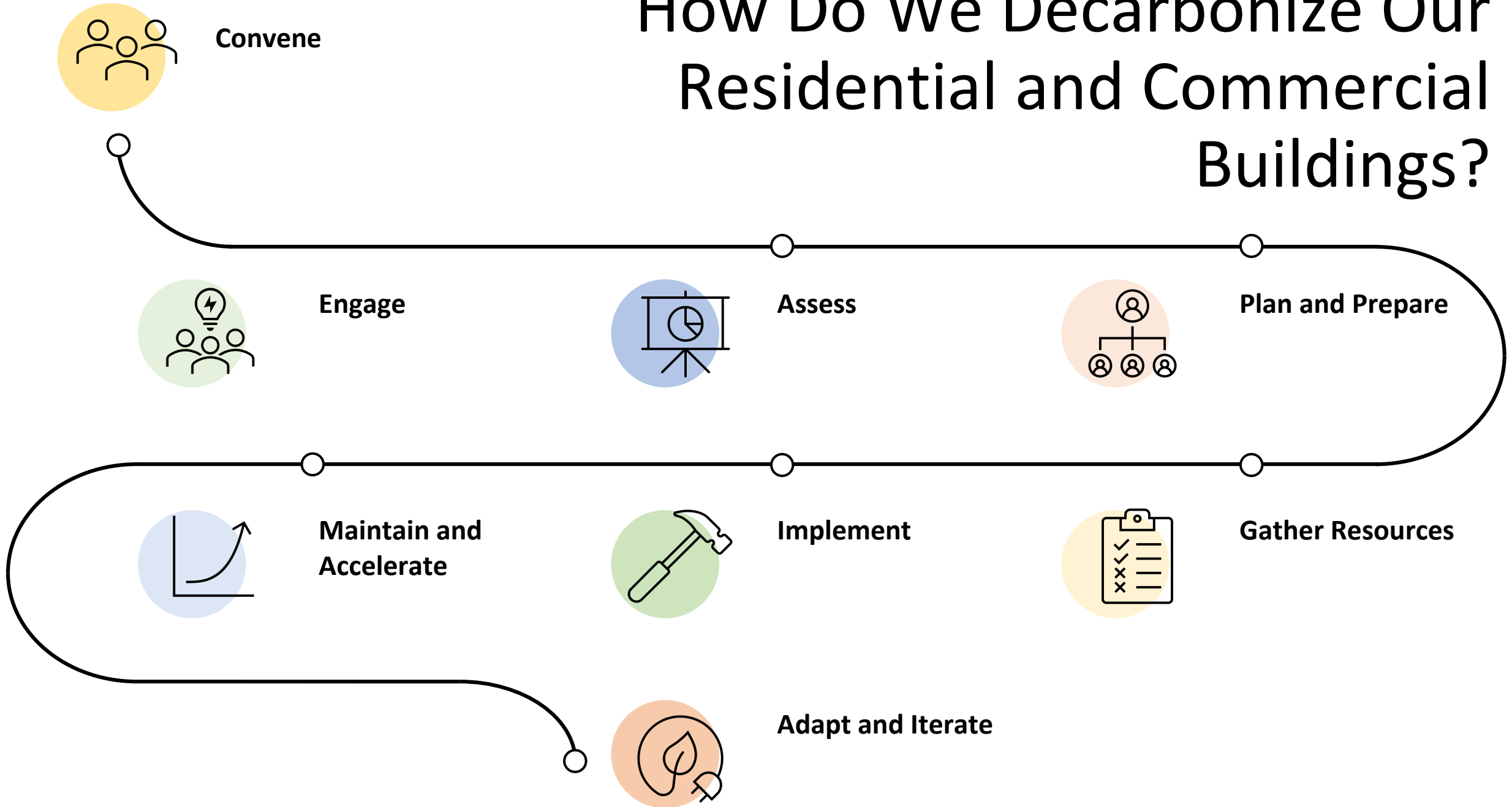


How Do We Decarbonize Our Residential and Commercial Buildings?





Convene: Identify and map key partners, decision makers, and stakeholders

Who in our community will be positively or negatively impacted by our building decarbonization policies?

- Begin identifying stakeholders by considering how electrification and decarbonization might impact vulnerable communities. View tract-level energy burden and social vulnerability indices in the [Data Viewer](#), part of NREL's SLOPE platform.
- Investigate the relationship between development patterns and household costs with the Center for Neighborhood Technology's [Housing and Transportation Affordability Index](#).

Who should be involved in developing our building decarbonization strategy?

- Identify key stakeholders, foster support, assemble an advisory team, and determine what stakeholders' roles might be in program or policy adoption, implementation, and long-term operation using Chapter 2 of NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#).
- Make participation as easy as possible for stakeholders using NREL's [Best Practices in Community Energy Planning](#).

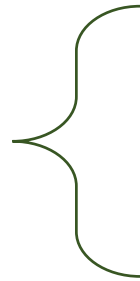
Which stakeholders have the expertise, influence, and resources necessary to inform plans and ensure success?

- Determine the roles for different stakeholders in leading policy change, fostering supportive market conditions, and implementing decarbonization policies and programs using ACEEE'S [Roadmap for Climate Forward Efficiency](#).
- Lastly, document each stakeholder's role, impact, and interest in planning and implementation using DOE's [Stakeholder Matrix](#).



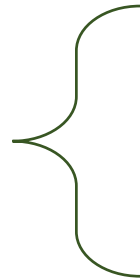
Engage: Invite diverse perspectives, center community voices, identify stakeholder priorities, and develop a shared vision

How can we improve equity through building decarbonization?



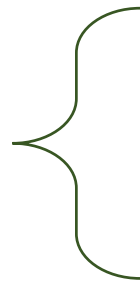
- Begin by defining equity with the stakeholders. Definitions of equity, energy justice, energy burden, and energy insecurity outlined in the [Energy Justice Workbook](#) provide a starting point.
- In addition to revisiting indicators of social vulnerability using SLOPE's [Data Viewer](#), explore how various housing and household characteristics relate to energy burden using DOE's [LEAD Tool](#). Then, investigate energy insecurity using the EIA's [Household Energy Insecurity data](#), while considering the [economic, physical, and behavioral factors](#) that can impact energy insecurity.
- Investigate how electrification can benefit low- to moderate-income households and frontline communities using Rewiring America's [Plan to Accelerate Climate Action and Environmental Justice By Investing in Household Electrification at the Local Level](#).

Which economic, environmental, and community resilience benefits matter most to our community and stakeholders?

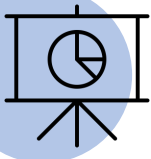


- Assess community needs, identify indicators, and align your building electrification goals with community needs using Greenlining Institute's [Framework for Powering Resilient Communities](#).
- As you explore possibilities with stakeholders, consider the city-, county-, state-, and district-level benefits estimated by Rewiring America's [Benefits of Electrification Map](#).

What is our shared vision of success?



- Create a shared vision of success to help guide conversations with stakeholders, build public support, attract investors, and bolster grant applications. Revisit Chapter 2 of NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#) to learn how to create a shared vision and craft a compelling story for public messaging.
- Explore projections for energy consumption, CO₂ emissions, and technology adoption rates to help connect stakeholder visions and priorities to mobility, renewable energy, and decarbonization goals using SLOPE's [Scenario Planner](#).



Assess: Map existing assets and analyze policy, market, societal, and technical barriers and opportunities

What does our building stock look like today? How might that change in the future?

- Investigate your residential building sector using DOE's [LEAD Tool](#).
- Estimate the electricity and natural gas savings potential of energy-efficient technologies in your community's residential and commercial sectors using SLOPE's [Data Viewer](#).
- If needed, you can dive deeper into the energy and cost savings potential of your residential and commercial building stock using NREL's [ResStock Data Viewer](#) and [ComStock Data Viewer](#).

What are the technical and operational factors that affect energy use?

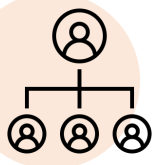
- Find low-cost efficiency measures, projects, and products using ENERGY STAR®'s [Energy Savings at Home](#) and [Ways to Save in Commercial Buildings](#).
- Investigate the barriers to achieving multifamily building energy savings using the Regional Energy Efficiency Organizations' [Multifamily Energy Efficiency Retrofits: Barriers and Opportunities for Deep Energy Savings](#).

What are the social and behavioral factors that affect energy use?

- Explore a room-by-room summary of key conservation behaviors using My Florida Home Energy's [Table of Tips](#).
- Revisit the EIA's [Household Energy Insecurity data](#) to learn how energy consumption and energy insecurity differ by household demographics, housing characteristics, and geographic and climate regions.

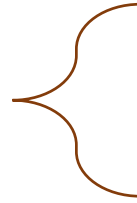
What are the key planning documents and policies that affect energy use in our buildings?

- Explore the state of climate policy in the southern United States from the SEAP's [State + Local Decarbonization Policies for the South](#).
- Lastly, develop an energy master plan by consulting Chapter 5 of NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#).



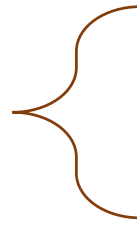
Plan and Prepare: Identify human, technical, and financial resource needs and align with equity and resilience goals

Will our energy plan support our community's equity goals?



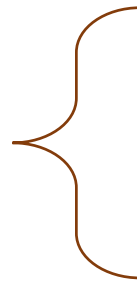
- Consider the shared vision of success your community created earlier and consult the International Energy Agency's [Multiple Benefits of Energy Efficiency](#) to aid a discussion of how these benefits align with stakeholders' goals and priorities.

How can we help local businesses and workers benefit from decarbonization?



- Consult ACEEE's [Through the Local Government Lens: Developing the Energy Efficiency Workforce](#) report to see how local governments can support an energy efficiency workforce.
- Help workers gain the necessary skills and credentials with DOE's [Weatherization Standardized Curricula](#) and IREC's [Clean Energy Resources and Training](#).

How can we anticipate potential risks and plan for long-term resilience?



- Consider common types of project risks and strategies for addressing them, described in Phase 0 and Phase 3 of DOE's [Energy Transitions Playbook](#). Enter identified risks into a [Risk Reporting Matrix](#) to help the project team with mitigation planning.
- View Better Buildings [Webinar Series](#) on resilience for best practices and cost-effective strategies for growing resilience in the building sector. Find additional guidance on resilience in their [Resilience Resource Navigator](#).

What financial and institutional resources are needed to carry out our plan?



- Develop financial and business models using Chapter 3 of NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#).
- Investigate the roles for different stakeholders to align policies, prepare the market, and deliver programs using ACEEE's [Roadmap for Climate-Forward Efficiency](#).
- Consider the costs of developing and implementing energy efficiency policies using ACEEE's [By the Numbers: The Benefits and Administrative Costs of Building Efficiency Policies](#).



Gather Resources: Finalize budgets, schedules, and partnerships for near-term projects

How do we identify the best funding opportunities for our near-term projects and craft successful applications?

- View the Florida Race to Zero [Webinar](#) for an overview of funding provisions in the Bipartisan Infrastructure Law and how state and local governments and utilities can access these funds.
- Explore federal funding opportunities, including program details, eligibility requirements, and helpful tips, in the [Federal Funding Opportunities for Local Decarbonization \(FFOLD\)](#) resource.
- Explore [SAM.gov](#) and [Grants.gov](#), which are the most comprehensive lists of federal grants. Also explore Better Buildings [Financing Navigator](#) and [Carbon Financing Decision Tree](#).

How do we coordinate with the public and private sectors and with institutional partners on near-term projects? How do we establish consistent and transparent reporting processes?

- Engage building occupants, utilities, and investors by consulting Better Buildings' [Decarbonization Resource Center](#).
- Develop strategies to collaborate with local utilities using Chapter 4 of NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#).
- Use the [Sponsor Coordination Matrix](#) to keep track of projects' timelines, funding sources, and funding amounts.

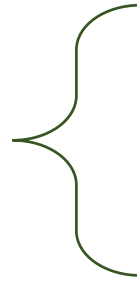
What is our long-term plan for financial sustainability?

- For an overview of financing options and lessons learned, consult Better Buildings [In It for the Long Haul: Long-Term Financing Solutions for Energy Savings](#).
- Dive deeper into specific financing options using Better Buildings [Energy Savings Performance Contracting \(ESPC\) Toolkit](#) and [Revolving Loan Funds in Commercial Real Estate](#) guidance.



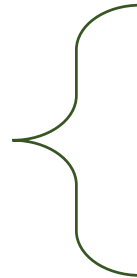
Implement: Issue contracts and permits, mitigate risks, and track and report progress

How can we mitigate potential environmental, social, and safety risks?



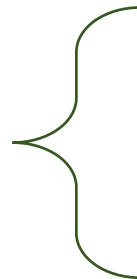
- Explore opportunities to use investments in energy as tools for social change using Greenlining Institute's [Investing in Climate Equity: Lessons and Opportunities for Increasing Green Bank Investments in Communities of Color](#).
- Review good international industry practices to preserve environmental quality, occupational and community health and safety, and waste management using the World Bank Group's [Environmental, Health, and Safety Guidelines](#).

How can we vet contractors and vendors for energy efficiency services and streamline permitting processes?

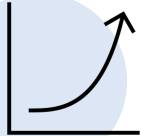


- Use a request for proposals to convey specific expectations and requirements to project developers. NREL's [Guide to Energy Master Planning of High-Performance Districts and Communities](#) describes how to align a request for proposals with the community's vision.
- Revisit Better Buildings [Energy Savings Performance Contracting \(ESPC\) Toolkit](#) for additional resources pertaining to performance contracting.

How can we structure performance plans and establish metrics to track and report progress?



- Explore resources for energy efficiency program administrators and project managers in DOE's [SEE Action Evaluation, Measurement, and Verification Resource Portal](#).
- Follow SWEEP's [Best Practices for Conducting Energy Code Compliance Studies](#) to design efficient and economical processes for verifying that new buildings comply with stringent building energy codes.



Maintain and Accelerate: Monitor performance, maintain reliability, and promote success

How can we measure and celebrate success and identify opportunities for improvement?

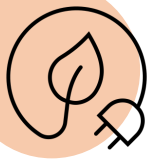
- Evaluate energy and demand savings, avoided emissions, and other benefits of energy efficiency programs using DOE's [Energy Efficiency Program Impact Evaluation Guide](#).
- Develop consistent methods to track and communicate progress and benchmarks using ACEEE's [Local Clean Energy Self-Scoring Tool](#).

How can we facilitate upgrades and behavior-based energy efficiency in private residences and businesses?

- View the Better Buildings [Webinar](#) on Internal Engagement and Communication, which offers actionable insights to reducing energy and emissions through employee-driven behavior change.
- Explore [My Florida Home Energy](#), which allows residents to create a customized plan for saving energy and provides advice on selecting a good contractor, applying for financing, and finding incentives.
- Develop effective messaging and communication tools that can be incorporated in presentations, mailers, social media posts, and other outreach efforts. Rewiring America's electrification infographics, including the [Homeowner](#) and [Renter](#) checklists, the [Electrification Planning Chart](#), and [Picturing Where to Electrify Everything in Your Home](#), provide a good starting point.

What policies can help accelerate decarbonization while improving health and equity in our community?

- For policy recommendations, revisit Rewiring America's [Plan to Accelerate Climate Action and Environmental Justice By Investing in Household Electrification at the Local Level](#) and the Southern Economic Advancement Project's [State + Local Decarbonization Policies for the South](#).
- Consider adopting code language from SWEEP's [Building Electrification: How Cities and Counties are Implementing Electrification Policies](#).



Adapt and Iterate: Strive for continuous learning, growth, innovation, and amplification

How do we future-proof our buildings and prepare for emerging technologies?

- Plan for grid integration, energy storage, and electric vehicle charging infrastructure using the analysis approaches described in Chapter 9 of NREL’s [Guide to Energy Master Planning of High-Performance Districts and Communities](#).
- Explore the possible impacts of building electrification on residential and commercial energy consumption and emissions in your county using SLOPE’s [Scenario Planner](#). SLOPE’s state planning metrics can help you plan for infrastructure development.
- Explore Better Buildings resources on [Utilizing Emerging & Existing Technologies to Reduce Carbon](#) and [Leveraging Renewables to Reduce Carbon](#) and gain specialized knowledge using the [Technology Information Suites](#).

How do we support an adaptable local workforce and business community to keep pace with future repair, replacement, growth, and upgrade needs?

- Revisit ACEEE’s [Through the Local Government Lens: Developing the Energy Efficiency Workforce](#), DOE’s [Weatherization Standardized Curricula](#), and IREC’s [Clean Energy Resources and Training](#) to see how local governments can support an energy efficiency workforce.
- Help workers find career guidance, credentialing programs, training, internships, and apprenticeships through the Better Buildings [Workforce Development Portal](#).

How do we amplify the impact of early wins and harness momentum to achieve our more ambitious goals?

- To pave the way for future development, ensure that early projects are done right by revisiting NREL’s [Guide to Energy Master Planning of High-Performance Districts and Communities](#) (p. 30).
- Assess the social equity impacts of early projects and communicate the results and lessons learned using Greenlining Institute’s [Making Equity Real in Climate Adaptation and Community Resilience: A Guidebook](#). This can help the project team find opportunities to achieve more ambitious goals and maintain public trust, enthusiasm, and support
- Consider pursuing a lead-by-example model, exemplified by an [interagency competition in Maryland](#), which mobilized the public sector to save energy.