Communities LEAP (Local Energy Action Program) Pilot

Competitive Technical Assistance Opportunity

U.S. Department of Energy

November 8, 2021

Modifications

All modifications to this Opportunity Announcement are HIGHLIGHTED in the body of the document.

Mod. No.	Date	Description of Modification	Page(s)
1	09/28/21	Adds information and a link to data on each of the eligibility criteria. Added Office Hours dates and times	9 11
2	10/25/21	Adds a clarifying sentence about DOE's intent to assist participating communities at the conclusion of their technical assistance periods.	2
3	10/25/21	Pathway name change: "Clean Energy Planning and Development" replaces "Renewable Energy Planning and Development."	4
4	10/25/21	Clarifies the environmental justice eligibility criterion by striking "energy-related" and "from the siting of large-scale energy or industrial facilities" from its description.	9
5	10/25/21	Add clarifying information to multi-stakeholder team requirements.	10
6	10/25/21	Clarifies that registration and application periods open on 10/25/21.	11
7	10/25/21	Adds clarifying information to item f in the Summary set of Application Questions and Required Information	13
8	11/8/21	Removed reference to DOE-designated Clean Cities coalitions and corresponding footnote.	22

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A. Competitive Technical Assistance Opportunity Description

1. Introduction and Background

The Communities LEAP Pilot Initiative of the U.S. Department of Energy (DOE) seeks to help communities access the economic and environmental benefits of clean energy and clean energy manufacturing. The pilot initiative aims to facilitate sustained community-wide economic empowerment through clean energy, improve local environmental conditions, and open the way for other benefits primarily through DOE's clean energy deployment work. This opportunity is specifically open to low-income, energy-burdened communities that are also experiencing either direct environmental justice impacts, or direct economic impacts from a shift away from historical reliance on fossil fuels.

The opportunities and potential benefits from the transition to net zero energy are compelling. They include lower local air pollution, lower utility costs and energy burdens, improved access to reliable energy, enhanced economic productivity, and new clean energy supply chain demonstration and manufacturing opportunities. Many of these opportunities will create and sustain high quality jobs when coupled with strong labor standards.

The country is facing a period of major investment in new clean energy technologies and their supply chains, and DOE designed this competitive technical assistance opportunity to help ensure that communities will benefit from clean energy investments, advancing priorities detailed in President Biden's Executive Order 13985, *Advancing Racial Equity and Support for Under-served Communities Through the Federal Government;* Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad;* and Executive Order 14017, *America's Supply Chains.*

Under this pilot initiative, DOE will provide technical assistance services valued at up to a total of $16 million to support 24-36 communities to develop their own community-driven clean energy transition approach. Technical assistance is defined on page 2, and its goals and structure are described in this document below, as well as in Appendix A. **THIS IS NOT A FUNDING OPPORTUNITY ANNOUNCEMENT.**

Examples of community-wide clean energy opportunities that can lead to substantial economic, environmental, and other benefits to communities are provided below in the section titled "Pathways to Clean Energy-Related Economic Development" and further detailed in Appendix A. It is DOE's intent to help selected communities realize those benefits.

DOE has designed this pilot initiative with the aim of:

- Recognizing each community's specific energy-related challenges and opportunities.
- Supporting community member and stakeholder leadership in designing and implementing actions to address those challenges and opportunities.
- Building toward long-term community economic and environmental change and a more sustainable, resilient, and equitable future.

Multi-stakeholder teams representing Communities of Interest (described in Section A.3) can apply to this opportunity whether they are ready to begin their clean energy transition or their transition is

already in progress. Selected communities will commit to working with DOE and its technical assistance provider network for approximately 12-18 months. Communities will receive assistance to:

- Work together as a community to identify local clean energy objectives, core community assets, and data and resource requirements.
- Create a plan built on those objectives, strengths, and resources to bring economic and other benefits to the community.

At the end of the technical assistance period, each participating community will have an action plan that prepares it to take further steps toward realizing its goals, including leveraging federal, state, and local funding or financing opportunities, participating in programs offered by philanthropic organizations, and/or partnering for private sector investment. DOE intends to assist participating communities in identifying specific resource opportunities to take those further steps.

This technical assistance opportunity is offered jointly by DOE's Offices of Energy Efficiency and Renewable Energy, Electricity, Policy, Fossil Energy and Carbon Management, and Economic Impact and Diversity. This pilot initiative complements DOE's ongoing efforts to deliver the benefits from clean energy research, development, demonstration, and deployment to environmental justice communities and communities with historical ties to fossil fuel industries. Furthermore, this pilot complements services and resources across the federal government. DOE recognizes that energy is a critical part of a larger set of factors requiring cross-sectoral and long-term response for sustained economic and environmental health of the nation's communities.

2. Technical Assistance Structure

The term "technical assistance" is used throughout this document to refer to expertise and resources provided by DOE to selected communities. Technical assistance can take the form of deliverables (e.g., an action plan) and services (e.g., expert consultation) provided through DOE's network of experts, primarily in the fields of energy and economic development. DOE will make additional expertise available as needed to support the success of selected communities depending on the specific skills and capabilities required for success. As the provider of technical assistance, DOE views its relationship with selected communities receiving the technical assistance as a committed and collaborative partnership.

Technical assistance provided under this opportunity will focus on the development of community-driven clean energy plans with economic, environmental, and other benefits based on each community's unique combination of:

- Energy-related resources, assets, or potential.
- Social, institutional, and economic strengths and opportunities.
- The specific clean energy pathway the community hopes to pursue.

This opportunity is open to communities in the early stages of a clean energy-related economic development transition. DOE envisions supporting communities that are either launching or accelerating a clean energy transition for sustained economic, environmental, and other community-wide benefits from clean energy deployment, clean energy-based economic development, and/or decarbonization projects. Communities will apply for technical assistance under either the Launch Track or the Accelerate Track.

Launch Track

The Launch Track is for communities that are confident of their desire to pursue a clean energy transition but are in need of assistance to identify the specific energy pathway or pathways that will lead to clear economic, environmental, and other community-wide benefits. Selected communities under the Launch Track will be provided assistance to:

- Identify the clean energy-related economic development pathway(s) that offer the best fit to the community.
- Make a community-wide commitment to these pathway(s) through a resolution, Memorandum of Understanding (MOU) among the community's participating parties, adoption of an environmental or clean energy goal, and/or similar formalized approach.
- Develop a Community Roadmap, which is a strategic and long-range plan that defines clean energy-related economic development goals and major steps to achieve those goals.

Communities in the "Launch" phase of an energy transition may apply for technical assistance under this opportunity to support actions they see as necessary to the development of a Community Roadmap. These activities may include convening community stakeholders, compiling a list of energy-related risks and resilience opportunities, identifying key decision makers and resources, developing clean energy options materials relevant to the community, documenting the community's commitment to an energy transition, assessing strengths of the community relative to possible clean energy transitions, developing a governing framework to equitably manage a community-wide energy transition, drafting an energy transition vision statement, and setting a transition timeline.

Accelerate Track

Communities that have already developed an existing clean energy-related economic development Roadmap, strategic plan, or similar document that demonstrates a commitment to clean energy-related economic development should apply under the Accelerate Track. Communities applying under the Accelerate Track must include documentation of the existing community-wide clean energy-related economic development plan or similar plan in the application submission.

Communities selected for the Accelerate Track will receive technical assistance to create a business, action or implementation plan based on their existing community-wide plan to advance progress along specific clean energy-related economic development pathways already identified by the applicant community. In most cases, a community chosen for the Accelerate Track will have already chosen its desired pathway or pathways; however, the Technical Assistance provided under the program may highlight and provide connections to additional pathways to consider in implementation of these strategies.

Launch Track	**Accelerate Track**
Community leaders are ready to commit to one or more policy or program goals to incentivize clean energy-related economic development, convene	Community has completed initial community-wide planning and is ready to develop a business or action plan based on specific community-

community stakeholders to envision and assess opportunities to achieve that goal, and document the way forward in a community clean energy-related economic development Roadmap.	driven clean energy approaches to sustained economic transformation and other benefits, and progress toward "shovel-ready" clean energy deployment.

Communities LEAP core staff at DOE will connect selected communities to the relevant technical assistance provider organizations. One or more organizations may provide technical assistance to selected communities. Upon selection, each community will work with DOE's technical assistance providers to develop a scope of work for technical assistance based on community-led needs, technical feasibility and level of effort supported by this opportunity. DOE anticipates providing limited-duration technical assistance to selected communities for approximately 12–18 months after the start date.

Pathways to Clean Energy-Related Economic Development

Launch and Accelerate Track communities may choose to pursue one or more pathways toward clean energy-related economic development, and communities are encouraged to explore integrated approaches to increase community benefits by combining pathways. Selected communities together with their technical assistance providers may explore opportunities beyond the specific examples provided below that are in line with the objectives of this opportunity. Each pathway will include an emphasis on developing energy jobs and workforce skills, as well as promoting minority-owned businesses and small- to mid-size businesses.

Appendix A provides additional details on pathways to clean energy-related economic development. Note that Launch Track communities will not start out in one of these defined pathways but may end up pursuing one or more of them after working with a technical assistance provider. For those communities, the goal of technical assistance is to create a clean energy-related economic development Roadmap (with related activities described above) based on one or more of the following pathways, after a determination of which offer the best fit to the community.

- ***Clean Energy Planning and Development***

  Clean, low carbon electricity and renewable energy sources can provide significant local economic, environmental, reliability, and other benefits and are major tools in the fight against the climate crisis. Renewable energy sources can provide electricity at lower costs than delivered fuels and can pair with energy storage to deliver reliable electricity without the emissions of legacy generators. Locally-sited resources can also provide greater local control of the energy supply.

  For Accelerate Track communities, the goal of technical assistance for the Clean Energy Planning and Development pathway is to support communities in developing design, implementation, and/or investment strategies for renewable energy projects that meet local environmental, economic, or community priorities and quantifies community benefits where possible (e.g., energy bill savings, reduce pollution, improve energy access, revenue streams). Among other activities, DOE anticipates providing selected communities with an analysis of clean energy

planning and development opportunities based on current infrastructure, workforce availability, energy resource potential, utility regulatory structure, and other aspects of the community relevant to this pathway.

Projects could include technologies such as solar, wind, hydropower, geothermal, hybrid power plants, storage, energy efficiency, distributed energy resources, and electric vehicle charging stations. These plans could also outline how to transition a significant portion of local electricity and energy consumption to be served by renewable energy generation. Project designs, informed by community priorities, could include details such as project size and technologies, how to pay for new investments, and community roles in ownership or operation of the technologies.

- ***Energy Efficient Buildings and Beneficial Electrification Planning and Investment***

  Household energy expenditures are a top spending category for many Americans, and low-income households spend a larger portion of their income on home energy costs (e.g., electricity, natural gas, and other home heating fuels) than other households spend. This measure is often referred to as a household's "energy burden." One recent study found that low-income households face an energy burden three times higher than other households. High energy burdens can threaten a household's ability to pay for energy, and force tough choices between paying energy bills and buying food, medicine, or other essentials.[1] Further, buildings account for more than 70% of U.S. electricity use, with demands for services such as air conditioning frequently driving peak energy needs and costs. Lastly, Americans spend 90% of their time indoors, making buildings a critical element to comfort, indoor environmental quality, and health and safety. Energy-related building improvements not only reduce energy burden to consumers and overall poverty burden but can also increase building energy control, improve heating and cooling efficiency, and improve building resilience.

  The goal of technical assistance for the Energy Efficient Buildings and Beneficial Electrification Planning and Investment pathway is to develop a customized plan to comprehensively approach energy-related building upgrade programs in support of community clean energy objectives. DOE's technical assistance providers will work with community stakeholders to assess the current building stock and power supply, identify building-related load management needs and opportunities for energy and cost savings, and determine additional community priorities such as reducing energy bills for residents and businesses, increasing building and community resilience and sustainability, improving the health of indoor environments, and developing new workforce opportunities. The technical assistance providers will facilitate stakeholder engagement to incorporate community objectives and needs and provide proven strategies for an energy plan that incorporates recommended partnerships and investment options.

  The plan may include projects focused on building efficiency, demand flexibility, distributed energy resources, and/or electrification solutions across different building types such as residential homes in neighborhoods, multifamily and commercial public buildings and/or privately-owned commercial buildings.

[1] WIP-Energy-Burden_final.pdf

- ***Clean Transportation Planning and Investment***

  The transportation sector accounts for approximately 30% of total U.S. energy needs and is the largest source of greenhouse gas emissions in the energy sector. The average U.S. household spends more than 15% of its total family expenditures on transportation, making it the biggest expense for families after housing. This can be up to 30% for lower income households. Transportation is also critical to the overall economy, from the movement of goods and people to providing access to jobs, education, and healthcare. Providing cleaner, more affordable mobility options is a goal of many communities across the country.

  The goal of technical assistance for the Clean Transportation Planning and Investment Pathway is to assist communities with developing a clean energy transportation plan to meet community objectives. DOE's technical assistance providers will work with community stakeholders to assess the local transportation system, identify community transportation needs, and determine plan objectives (e.g., decarbonization, air quality improvement, community access to transportation, workforce development, increase in electric vehicle charging availability, assessment of grid capacity for transportation electrification). The technical assistance providers will work with communities to develop strategies to meet community transportation needs and objectives and facilitate stakeholder engagement to develop a clean energy transportation plan. The clean energy transportation plan will inform future community partnerships and investments. The plan may include projects that implement alternative fuels, fuel-saving technologies and practices, and new mobility choices.

- ***Carbon Capture and Storage***

  Carbon Capture and Storage (CCS) is regarded as a one of the key pathways for combatting the climate crisis by reducing carbon dioxide (CO_2) emissions from industries that together currently vent billons of tons of CO_2 every year. These emissions accumulate and stay in the atmosphere for decades unless they can be avoided or captured and stored. Certain parts of the country have natural geologic formations for reliable storage of CO_2. CCS projects can help the United States meet its climate goals while also improving the conditions of communities. Recently enacted incentives such as the amended 45Q tax credit and California's Low-Carbon Fuel Standard support making CCS an economically viable option for some CO_2-emitting industries, which has created a surge in interest in deploying CCS as part of a nationwide effort to transition to clean energy sources and low-carbon industries.

  The goal of technical assistance for the CCS pathway is to assist communities with evaluating whether CCS could be included in their long-term clean-energy and clean-manufacturing plans. DOE's technical assistance providers will develop a pre-feasibility study and Roadmap of a potential CCS project that would fulfill or partially fulfill that community's interest in transitioning to a clean energy economy with consideration of job creation/transition and environmental justice issues and opportunities. The pre-feasibility study would be a tangible product designed to help move a future CCS project forward.

- ***Energy Site Reclamation and Critical Minerals Processing***

  Over the past century, energy-related activities have left a legacy of environmental impacts (e.g., mine tailings, ash piles, acid mine drainage (AMD)) in thousands of communities across the country. In many communities, these sites have not been fully remediated and remain a potential threat to the community from an environmental and economic standpoint. In some cases, these waste materials that were left behind can become a valuable resource because they contain critical minerals including rare earth elements that could help pay for remediation costs, while producing valuable domestic resources needed to support the clean energy transition. Secure and resilient critical mineral supply chains need to be quadrupled in the next 20 years to enable growth in electric vehicles and other clean energy technologies.

  The goal of technical assistance for the Energy Site Reclamation and Critical Minerals Processing pathway is to assist communities with evaluating whether there is a significant concentration of rare earth elements or other critical minerals within their community or region to justify building a minerals processing facility to remediate the waste while separating and concentrating the valuable critical minerals. DOE's technical assistance providers will work with the community to develop a pre-feasibility study for a potential critical minerals processing facility that will: evaluate the scale of the remediation and critical minerals extraction opportunity; assess the potential economic prospects of such a facility and related remediation activities; and identify specific workforce needs and opportunities in pursuing this pathway.

- ***Community Resilience Microgrids***

  A microgrid is a local energy grid with control capability, which means it can disconnect from the traditional grid and operate autonomously. A microgrid not only provides backup for the grid in case of emergencies, but can also be used to cut costs, or connect to a local resource that is too small or unreliable for traditional grid use. A microgrid allows communities to be more energy independent and, in some cases, more environmentally friendly. Microgrids can support economic development and/or community resilience efforts by reducing the number and duration of outages, increasing power reliability and quality, supporting cost effective growth in a timely manner, and reducing energy costs.

  The goal of technical assistance for the Community Resilience Microgrids pathway is to assist communities with evaluating the suitability of microgrids for the community (including the regulatory, technical, and financial barriers and opportunities); the potential location, size, and composition of a new microgrid; how best to match renewable energy and storage alongside conventional generation to meet a community's most important loads (such as electric, thermal, and water) at the lowest life cycle cost; and the potential for a microgrid to provide power during outages. DOE's technical assistance providers will work with the community to develop a plan that outlines a series of investments to meet a community-wide resilience goal, or locally-developed parameters for microgrid projects that provide environmental, economic and/or social benefits to the community.

- ***New or Enhanced Manufacturing***

  The manufacturing sector is a cornerstone of the U.S. economy; more than 240,000 manufacturing firms employ roughly 8.5% of the workforce and account for approximately 11% of the country's gross domestic product (GDP). At the community level, the U.S. manufacturing footprint translates to substantial opportunities for economic growth and high-quality jobs, including for the 60% of Americans without a four-year college degree. Manufacturing jobs are particularly impactful for communities, as each manufacturing job creates multiple indirect jobs in other sectors like product and process engineering, design, operations and maintenance, transportation, testing and lab work, as well as in the payroll, accounting, and legal fields. U.S. manufacturers will be critical to producing solar panels, wind turbine blades, batteries, and other technologies key to the country's clean energy transition. At the same time, manufacturing, which currently accounts for approximately one quarter of U.S. greenhouse gas emissions, faces its own decarbonization challenges.

  The goal of technical assistance for the New or Enhanced Manufacturing pathway is to assist communities in developing and implementing a strategy to foster a strong, clean, and resilient local manufacturing ecosystem, including assessing potential for clean energy supply chain manufacturing. Selected communities can receive assistance to engage with existing local manufacturing facilities on energy performance to lower emissions and reduce waste; identify how local strengths—such as natural resources or existing manufacturing infrastructure or capabilities—could play a role in manufacturing new clean energy technologies; evaluate education and workforce development resources to train a skilled local workforce; and/or provide planning support for new manufacturing capacity. This coordinated approach can help communities develop more sustainable and cost-competitive manufacturing capabilities while fostering local conditions to attract new firms to the area.

  DOE's technical assistance may also connect community-based manufacturers with additional opportunities, such as demonstrating emerging technologies at their facilities, receiving financial consulting services, and conducting R&D at cutting edge facilities like the Oak Ridge National Laboratory (ORNL) Manufacturing Demonstration Facility.

Applications Specifically Not of Interest

- Technology R&D or commercialization projects or programs.
- Applications for capital projects, including the purchase or installation of infrastructure or equipment.
- Public education, lobbying, or advocacy campaigns.
- Applications that are not focused on community-scale impacts.
- Applications from teams that do not represent the applying community. Applications will be evaluated in part based on the extent to which community members, organizations, or businesses are directly and substantively involved in the project design and execution in a leadership role, either as team lead organization or as a member of the multi-stakeholder team with responsibility for a substantial share of project effort.

- Applications seeking funding. This opportunity is to provide technical assistance only; financial assistance (e.g., for project deployment) is not available under this program, though may be available through other DOE programs.[2]

3. Communities of Interest and Eligibility

Eligible Communities

For the purpose of this pilot initiative, a community is defined as a group of individuals, households, and businesses in geographic proximity to one another. This opportunity is focused on strengthening environmental justice and fossil fuel communities—and is not focused on providing direct assistance to individual persons, companies, or technologies. Communities in the United States—including tribal nations and territories—are eligible to apply under this competitive technical assistance opportunity if they meet the criteria below:

- 30% of the community population is classified as low income. **AND**
- High or severe energy burden[3] (median spending of household income on energy bills ≥6%).

As well as one of the following criteria:

- Historical economic dependence on fossil fuel industrial facilities including extraction, processing, or refining. **OR**
- Environmental justice communities as indicated by high exposure to environmental hazards, pollution, and toxicity, such as communities rated as moderate or high susceptibility on the U.S. Environmental Protection Agency's EJSCREEN tool.[4]

Data on each of the criteria is provided HERE[5]. While these data are provided at the census tract level, census tracts do not necessarily have the same physical boundaries as a community but were used as they provide the closest proxy based on publicly available information collected using an empirically robust method. Applying communities should describe how they meet the eligibility criteria in their application even if these data do not specifically show that they are eligible.

Eligible Entities

Multi-stakeholder teams representing communities are eligible to apply to this competitive technical assistance opportunity.

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[2] Current Funding Opportunity Announcements from the DOE Office of Energy Efficiency and Renewable Energy are at https://eere-exchange.energy.gov/. Current Funding Opportunity Announcements from the DOE Office of Fossil Energy and Carbon Management and the DOE Office of Electricity are at Solicitation | netl.doe.gov

[3] Energy burden is defined as the percentage of gross household income spent on energy costs. Information about community energy burden can be found at Low-Income Energy Affordability Data (LEAD) Tool | Department of Energy

[4] EPA EJ Screen EJSCREEN: Environmental Justice Screening and Mapping Tool | US EPA

[5] Datasets for DOE 2021 Communities LEAP Pilot - Submissions - EDX https://edx.netl.doe.gov/dataset/datasets-for-doe-2021-communities-leap-pilot

Community applicants in the form of multi-stakeholder teams ***must:***

- Identify a lead organization to represent the team.
- Include at least one community-based organization with a demonstrated track record of working with community stakeholders. (Note: This can be the same as the lead organization.)
- Include at least one local, tribal, territorial, regional, or state government entity. (Note: This can be the same as the lead organization.)
- Include entities and organizations that together have sufficient authority and influence to ensure overall success in applying the DOE-provided technical assistance within the community toward the community's goals and objectives.

Community multi-stakeholder teams are ***strongly encouraged*** to include a local economic development official.

Community multi-stakeholder teams ***may*** include, but are not limited to, the following types of organizations: non-profit organizations, community-based organizations, grassroots organizations and environmental justice networks, faith-based organizations and those affiliated with religious institutions, private organizations, and academic institutions. Community multi-stakeholder teams ***may*** also include companies, corporations or similar organizations contributing to the economic development of the community, in particular (1) the community's minority-owned businesses and small- to mid-size businesses; (2) organizations critical to success such as manufacturing firms under the New or Enhanced Manufacturing pathway or utilities (investor-owned or public power) under the Clean Energy Planning and Development, Energy Efficient Buildings and Beneficial Electrification Planning and Investment, or Community Resilience Microgrid pathways, for example.

Ineligible Entities

Ineligible entities for this opportunity are individual persons, foreign entities, and Federally Funded Research and Development Centers (FFRDCs). Note that members of the technical assistance provider network supported by DOE under this initiative are prohibited from applying or being members of an applying team.

B. Submission Information and Application

4. Important Dates and Deadlines

• Opportunity Announcement Issued • Comment Period Opens	September 15, 2021
• Informational Webinar	September 28, 2021 3:30 p.m. to 5 p.m. ET
• Comment Period Closes	October 12, 2021
• Final Opportunity Announcement Issued • Registration and Application Period Opens	October 25, 2021
• Office Hours 1	November 9, 2021, 3:30 p.m. to 5 p.m. ET
• Office Hours 2	December 7, 2021, 3:30 p.m. to 5 p.m. ET
• Registration Period Closes	December 15, 2021 at 5 p.m.ET
• Application Deadline	December 17, 2021 at 5 p.m.ET
• Expected Date for Selections	March 28, 2022

All dates are subject to change.

Comment Period

The comment period begins on September 15, 2021 and ends on October 12, 2021 at 5 p.m. ET. DOE will accept comments on this competitive technical assistance opportunity announcement during the comment period. Comments will only be accepted through emails addressed to CommunitiesLEAPInfo@hq.doe.gov. DOE will not respond to comment emails.

After reviewing comments from the public, DOE may choose to make amendments to the competitive technical assistance opportunity announcement. DOE will issue a final opportunity announcement on October 25, 2021 with any and all changes listed at the beginning of the document. The final opportunity announcement will be posted to the Communities LEAP website at https://www.energy.gov/communitiesLEAP/.

Questions

The Frequently Asked Questions (FAQs) in connection with this competitive technical assistance opportunity announcement will be posted at https://www.energy.gov/communitiesLEAP/. Applicants are encouraged to check the FAQs webpage prior to submitting a question. DOE will regularly update the FAQs webpage. Any other questions regarding this competitive technical assistance opportunity announcement must be directed to CommunitiesLEAPInfo@hq.doe.gov. Questions must be submitted not later than three (3) business days prior to the application due date and time. DOE will strive to respond to a question within five (5) business days unless a similar questions and answer has already been posted on the website's FAQs page.

DOE will host virtual informational sessions related to this announcement. The dates, times, and information on how to participate will be available on the website.

5. How to Apply

The application process for this competitive technical assistance opportunity consists of two steps: registration and application. The registration and application steps are web-based and require an internet connection.

Two-Step Application Process

Step 1: Registration

In order to apply, applicants ***must*** register first. Applicants must register through this opportunity's registration portal hosted by the National Energy Technology Laboratory (NETL). The registration portal can be accessed from the Communities LEAP website when the registration period opens at https://www.energy.gov/communitiesLEAP/. The registration period opens on October 25, 2021 and closes at 5 p.m. ET on December 15, 2021. Because DOE needs time to process registrations, this is a hard deadline. The registration portal will not be accessible before or after the registration period.

Once registration is complete, the registering entity will receive confirmation from DOE with further instructions regarding how to apply.

Entities intending to apply ***must*** successfully complete the registration step. Entities that register are not required to apply. Applicants are strongly encouraged to register at least 48 hours in advance of the registration deadline.

Step 2: Application

Applicants will be provided instructions regarding how to apply in the registration confirmation email. Applications must comply with all instructions below and be uploaded to this opportunity's application portal hosted by NETL. Applications will be received through the online submission portal until December 17, 2021 at 5 p.m. ET.

Application Questions and Required Information

The application must contain the following components and should be identified by the headings in the order listed below. **The application must not be more than 15 pages,** not including resumes, letters of commitment and, for communities applying under the Accelerate Track, documentation of the existing community-wide Roadmap, strategy or equivalent plan that supports the request for technical assistance under the related pathway(s).

Summary

a. Title of submission.
b. Community name.
c. Community location (including neighborhood(s) if applicable, city, state, and ZIP code(s)).
d. Contact information for lead organization representing the applying multi-stakeholder team (name, address, telephone number, and email address).
e. Description of the lead organization's mission and reason for being selected as the lead.
f. Description of how the community meets the eligibility criteria above in Section A.3, "Communities of Interest and Eligibility." This includes information regarding the community's level of energy burden and low income population(s), and whether the community has a historical dependence on the fossil fuel industry or has high exposure to energy industry-related environmental toxicity. Please be as specific as possible and provide data sources where available, including but not limited to the DOE-provided data in Section A.3, above.
g. Abstract: Brief description (250 words or less) of the main objective, activities, and outputs/outcomes of the proposed approach, including the specific geographic areas of focus.

Energy and Economic Challenges and Opportunities

h. Description of community's energy-related economic development challenges and opportunities, and any steps the community has taken to address them.
i. Identification of pathway(s) of interest for clean energy-related economic development (see Section A.2 and Appendix A for more information).
j. Track under which community is applying (pick one): Launch Track or Accelerate Track. *For communities applying under the Accelerate Track:* Provide a website link to the existing community-wide Roadmap, strategy, or equivalent plan that supports the community's request for technical assistance under the related pathway(s).
k. Background on the applying community, which could include:
    - Geographic, historical, demographic, employment, or other information relevant to this request.
    - Description of previous or existing relationships or partnerships with federal, state, local, private, academic, non-governmental or other partners relevant to this request.

Transformative Impact of Requested Technical Assistance

l. Description of technical assistance needed to launch or accelerate a clean energy-related economic development transition such as the following. Please be as specific as possible.
    - Statement of community's objectives/commitment to a clean-energy related economic development transition.
    - Specific activities, analyses, planning, or other support needed to launch or accelerate the community's clean energy-related economic development transition.
    - Description of how the technical assistance can help the community address its energy and economic development challenges and opportunities.
m. Anticipated community-wide engagement and benefits as a result of requested technical assistance such as the following. Please be as specific as possible.

- Economic opportunities for the community, including specific opportunities for minority populations.
- Opportunities for Diversity, Equity, and Inclusion (DEI), as well as environmental justice and the potential to positively impact community members.
- Community stakeholder engagement opportunities.
- Opportunities to improve historically under-served communities.

Team Composition

n. Names of each organization applying as part of the community's multi-stakeholder team.
o. For each organization, a brief description of its:
    - Mission.
    - Key ongoing projects/activities in which it is involved.
    - Role and responsibilities pertaining to the applying community and as a member of the applicant team.
p. For each organization, the name and title of the primary contact who will participate in the technical assistance engagement.
q. Identification of the local, tribal, or territorial government entity on the team (at least one is required).
r. Brief description of how the team has sufficient authority and influence to ensure overall success in applying the DOE-provided technical assistance within the community toward the community's goals and objectives.

Team Member Letters of Commitment

A statement of intended substantial involvement in the technical assistance engagement is required from each organization applying as part of the community's multi-stakeholder team. These letters of commitment do not count toward the application's 15 page limit.

Optional Documentation

Letters of support from organizations. Up to five resumes from key team members. This optional documentation does not count toward the application's 15 page limit.

Additional Requirements

Inclusion of Personally Identifiable Information (PII) (i.e., information that can be used to distinguish or trace an individual's identity) beyond what is specifically requested in this opportunity announcement is strongly discouraged. Inclusion of business sensitive or proprietary information is prohibited.

The full application must be submitted as a single document file. All pages must be formatted to fit on 8.5 x 11-inch paper with margins not less than one inch on every side. Use a font size of 11 point or larger. Stated page limits shall include all text, index, graphs/charts, images, logos, appendix, etc.

6. Evaluation Criteria

Applications will be screened for compliance with eligibility and submission requirements. Applicants that do not meet requirements will be notified; these applications will not be considered. Applications meeting the submission requirements will be evaluated and scored using the evaluation criteria described below.

For the purpose of the evaluation criteria below, "community" or "communities" refers to the description of Communities of Interest in Section A.3 of this document.

CRITERION 1: TECHNICAL MERIT AND VIABILITY (20%)

1. Extent to which the submission provides a clear description of how the community/ies meet the eligibility criteria in Section A.3, "Eligible Communities."
2. Extent to which the community/ies clean energy and economic development challenges and opportunities are clearly articulated.
3. Extent to which the submission clearly and convincingly demonstrates how the requested technical assistance can help the community/ies successfully address energy-related economic development objectives, challenges and opportunities beyond the current level of development or practice.

CRITERION 2: COMMUNITY CAPACITY BUILDING (25%)

4. Extent to which the submission directly includes key needs and preferences identified by the community/ies.
5. Extent to which the proposed approach is likely to increase the community/ies ownership of and/or decision-making regarding elements of the energy system or economy that are the source of the stated challenges and opportunities.
6. Extent to which the proposed approach is likely to build organizational and/or staff capacity to support the installation of clean energy technologies located in the community/ies, and/or support the community/ies participation in the clean energy economy.

CRITERION 3: MULTI-STAKEHOLDER TEAM COMPOSITION AND CAPABILITIES (25%)

7. Extent to which the community/ies members, organizations, or businesses are directly and substantively involved in project design and execution in a leadership role, either as team lead organization or as a member of the multi-stakeholder team with responsibility for a substantial share of project effort.
8. Extent to which team (and partners providing letters of commitment) includes the necessary members, skills, and demonstrated track record for the community/ies to be successful, including entity/ies in a decision-making role.

CRITERION 4: TRANSFORMATIVE IMPACT (30%)

9. Extent to which the proposed approach is likely to yield tangible and transformative economic and/or environmental benefits to the community/ies.

10. Extent to which the application demonstrates that the DOE technical assistance will materially and substantially impact the outcome of the proposed effort and result in sustained positive impact to the community/ies.
11. Extent to which project and project outcomes can be model approaches for other communities.

7. Other Selection Factors

In addition to the criteria above, the Selection Official may consider the following unweighted program policy factors in determining which applications to select for technical assistance under this opportunity:

- Geographic and demographic diversity (e.g., rural versus urban, Southeast versus. Northwest).
- Extent to which the community represents minority populations.
- Presence of additional compounding stressors, such as:
    - Lack of access to clean energy resources, electricity, or reliable energy.
    - Vulnerability to severe weather and climate events.[6]
    - A shrinking or slow-growing economy, especially within manufacturing-dominant communities.
- Diversity of Clean Energy-Related Economic Development pathways being pursued (aligned with DOE programmatic funding) and challenges being addressed (e.g., diversity of fossil energy reliance and energy and environmental challenges).

8. Terms and Conditions

By registering for and submitting an application to the Communities LEAP technical assistance opportunity, the applicant acknowledges and agrees to the following Terms and Conditions.

Compliance

DOE reserves the right to require additional documentation demonstrating an Applicant's compliance with the eligibility and application requirements and may at any time disqualify those Applicants who are unable to satisfactorily demonstrate compliance to DOE. Applicants must comply with the following eligibility requirements:

a. Applicants must have complied with all eligibility, registration and application requirements set forth above for Communities LEAP.
b. The Applicant's authorized representative must be a United States citizen or a permanent U.S resident and be at least 18 years of age.

[6] Such as those tracked by the NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2021). https://www.ncdc.noaa.gov/billions/

c. The lead organization representing the multi-stakeholder applying team must be formed (e.g., incorporated, chartered) in and maintain a primary place of business in the United States, which includes tribal nations and territories.
d. DOE employees and DOE support service contractors are not eligible to participate.
e. Non-DOE federal entities and federal employees are not eligible to participate.

By uploading an application, an Applicant certifies that it complies with the compliance and eligibility requirements described above. DOE reserves the right to require additional documentation demonstrating an Applicant's compliance and may at any time disqualify those Applicants who are unable to satisfactorily demonstrate compliance to DOE.

Applicant Representations and Warranties

Upon submission, the Applicant hereby represents and warrants that:

a. The Applicant has sufficient rights to use and to authorize others, including DOE, to use the application, as specified above.
b. The application does not contain Publicly Identifiable Information (PII), business sensitive or proprietary information beyond what is specifically requested in the application.
c. The application does not infringe upon any copyright or upon any other third-party rights of which the Applicant is aware.
d. The application does not constitute or result in any misappropriation or other violation of the publicity rights or right of privacy of any person or entity, or infringe, misappropriate or otherwise violate any intellectual property rights, privacy rights, or any other rights of any person or entity.
e. The application is free of malware.
f. The application, and any use thereof by DOE, is not defamatory or libelous in any manner.
g. The Applicant is free to provide an application without the consent of any third party.
h. The Applicant's authorized representative is a United States citizen or a permanent U.S. resident, and 18 years or older.
i. The Applicant is not a party to (and it agrees that it shall not become a party to) any agreement, obligation, or understanding that is inconsistent with these Terms and Conditions or might limit or impair DOE's rights or the Applicant's obligations under the Terms and Conditions.
j. The Applicant otherwise meets the eligibility requirements set forth by this technical assistance opportunity.

Verification of Eligibility and Notifications

DOE will verify the identity and the role of an Applicant potentially selected to receive the technical assistance. DOE will notify each selected applicant using the provided email contact information after the date that selections are announced. Before technical assistance is provided, each selected applicant will be required to sign and return to DOE, within a specified period of time, an agreement addressing the terms and conditions of the technical assistance to be provided. At the sole discretion of DOE, a selected Applicant may be disqualified and receive no technical assistance if:

- The Applicant cannot be contacted or the notification is returned as undeliverable.
- The Applicant fails to sign and return the required documentation within the required time period.
- The application or person/entity is not otherwise found to be in compliance with the Terms and Conditions.

Records Retention and the Freedom of Information Act

Information received from the Applicant is considered to be a federal agency record, and as such, subject to public release under the Freedom of Information Act (FOIA). Applicants should therefore use care in only submitting information that is necessary for purposes of the application. Inclusion of PII beyond what is specifically requested in this opportunity announcement is strongly discouraged. Inclusion of business sensitive or proprietary information is prohibited. For more information on DOE's FOIA process and regulations, please see 10 CFR Part 1004 and/or visit DOE's FOIA website here: https://www.energy.gov/management/office-management/operational-management/freedom-information-act.

Privacy Act Statement

Personally Identifiable information (PII) collected pursuant to this activity is subject to the requirements of the Privacy Act, 5 U.S.C. 552a. Any PII collected as part of this effort will be used for communication and evaluation purposes. Specifically, DOE will use this information to communicate with the applicants that respond to this Competitive Technical Assistance Opportunity and, in some limited circumstances, to evaluate members of a given applicant team when making selection determinations. Routine uses of this information include: applicant communication and technical review. For a complete overview of the routine uses for which this information may be used, please refer to the Department of Energy's System of Records Notification (SORN) at DOE-82. Disclosure of information under this action is voluntary, however failure to provide the requested information may result in an inability of the Department to make timely contact with the applicant with necessary communications regarding this Competitive Technical Assistance Opportunity.

Use of Data

All information and data contained in the application will be made available to DOE and parties authorized to act on behalf of DOE. By accepting these Terms and Conditions, the Applicant consents to the use of information and data submitted to DOE for evaluation purposes and for any other purpose consistent with the Terms and Conditions. All materials submitted to DOE as part of an application become DOE records and cannot be returned.

Relationship of the Parties

Nothing contained in these Terms and Conditions is intended to create or constitute a relationship between DOE and the Applicant. Participation in the technical assistance opportunity does not imply any form of sanction, endorsement, or support of the Applicant by DOE, nor does it grant either party any authority to act as agent, nor assume or create any obligation, on behalf of the other party. Applicants may not use the DOE logo or official seal in their submissions.

Merit Review and Selection Process

Each submission will be reviewed and evaluated by qualified technical reviewers and a Merit Review Panel selected by DOE at its sole discretion. Technical evaluators and Merit Review Panel members may not (A) have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered Applicant; or (B) have a familial or financial relationship with a registered Applicant.

The Merit Review Panel will rate the qualified applications based on the evaluation criteria identified above and determine a final score for each submission. DOE's final determination of selected applications will take the Merit Review Panel's scores and program policy factors listed above into account. All selection decisions by DOE are final. The scores of the Merit Review Panel and the final determination of selected applications may not be challenged or appealed.

Publicity

The selected applications may be featured on DOE social media sites, newsletters, and other similar forms of media. Except where prohibited by law, submission of an application constitutes each Applicant's consent to DOE's and its agents' use of each Applicant's name, likeness, photograph, voice, opinions, and/or hometown and state information, and abstract of each Applicant's submission for promotional purposes through any form of media, worldwide, without further permission, payment or consideration.

General Conditions

DOE reserves the right to cancel, suspend, and/or modify the technical assistance opportunity, or any part of it, if any fraud, technical failure, or any other factor beyond DOE's reasonable control impairs the integrity or proper functioning of the opportunity, as determined by DOE in its sole discretion. DOE is not responsible for, nor is it required to accept, incomplete, late, misdirected, damaged, unlawful, or illicit applications.

Appendix A: Detailed Examples of Pathways to Clean Energy-Related Economic Development

Clean Energy Planning and Development

Background: Many communities are choosing to expand clean energy deployment to meet local priorities and take bold steps toward local innovation and investment in the community. Renewable energy projects, including energy storage, can provide the power needed to support some or all local electricity consumption for many communities, supporting both local environmental outcomes and greater local control of the energy supply. In addition, renewable and carbon-free electricity and fuels are a major tool in the fight against climate change, and depending on the design and structure of projects, can provide significant local economic benefits. Local benefits will differ by community, but may include increased local revenue, new jobs, increased energy independence and resilience of the local power supply, lower electricity bills, greater resilience to cyber threats and natural disasters, improved local air quality, and greater local input into the location and design of large infrastructure projects. In order to fully decarbonize the power sector, renewable energy technologies such as wind and solar power will need to increase their presence significantly across the United States.

Clean energy projects may include:

- **Clean energy planning (e.g., community-wide climate action plan, 100% clean energy plan, or similar).** Communities seeking to transform their energy systems and become a model for clean energy growth will benefit greatly from careful planning. Strategic clean energy plans, including renewable energy generation, distributed energy resources, energy efficiency, and storage, can help evaluate the deployment pathways for these technologies to reach local goals, provide a Roadmap to attract needed investment, and help outline guidelines to ensure projects are successfully maintained and provide the full suite of local benefits envisioned.
- **Community-scale renewable energy.** Renewable energy projects, including energy storage, can provide the power needed to support some or all local electricity consumption for many communities, and an optimized project or system design is the first step in the planning process toward deployment. Project feasibility, including technical and economic viability, depends upon the physical design, integration with the power system, and the financing structure. In addition, and to be successful, projects should outline a long-term plan for maintenance and operations and should demonstrate how the local economy and environment will be enhanced for all community-members. In this effort, communities can apply for technical assistance to support all aspects of renewable energy project design.
- **Geothermal power plants and/or direct-use geothermal heating and cooling.** Communities with geothermal energy resources can receive technical assistance to create a feasibility study for geothermal binary cycle power plants, keeping energy production clean, local, and saving on energy bills while creating new clean energy jobs. Communities with geothermal resources can also evaluate the feasibility of community-scale geothermal heating and cooling solutions to reduce a community's electricity load on the grid, reduce carbon emissions and improve air quality.
- **Renewable energy for agriculture.** The agricultural sector has played a key role in the progress of the renewable energy sector, including as a critical sector for the siting of renewable power.

In addition, the agriculture sector represents nearly 10% of the nation's carbon emissions[7]—making this sector a significant opportunity for decarbonization. Communities can apply for assistance on siting of renewable power on agricultural land, and/or the development and deployment of renewable power to support agriculture, irrigation, and processing. This could include assistance on the siting of renewable resources (e.g., solar, wind, hydropower); evaluating energy-water infrastructure improvements for agriculture such as irrigation modernization; or evaluating other efficiency or power improvements to reduce costs and decarbonize operations.

- **Clean electricity access**. The Energy Information Administration estimates that nearly 15% of Native American households have no access to electricity, which is more than ten times the national average. Challenges for many of these homes are that they are located far from power lines and residents do not have access to affordable home power solutions. These residents therefore resort to expensive and dangerous gasoline generators, propane, and kerosene lanterns. Communities needing clean electricity access can receive assistance under this opportunity to plan and design clean, reliable electricity access through community-scale renewable power generation, interconnection, microgrids, and/or other strategic energy planning, project development, and clean energy infrastructure projects.

Candidate communities: Community renewable clean planning and development goals can be as unique as the community itself, but candidate communities should be interested in either transitioning local consumption to clean energy or planning or siting renewable energy generation projects in a way that helps reduce greenhouse gas emissions while meeting local priorities for environmental, economic, or societal benefits.

Next steps for implementation: At the end of the project period, communities participating in the Clean Energy Planning and Development pathway will have either a plan that outlines a series of investments to meet a community-wide clean energy goal, or locally-developed parameters for renewable energy projects that provide environmental, economic and/or social benefits to the community. In addition, the community will have either local project development capacity or local leadership and participation structure that can engage directly with externally based project developers.

Energy Efficient Buildings and Beneficial Electrification Planning and Investment

Background: Household energy expenditures are a top spending category for many Americans, and low-income households spend a larger portion of their income on home energy costs (e.g., electricity, natural gas, and other home heating fuels) than other households spend. This measure is often referred to as a household's "energy burden." One recent study found that low-income households face an energy burden three times higher than other households. High energy burdens can threaten a household's ability to pay for energy, and force tough choices between paying energy bills and buying food, medicine, or other essentials.[8] Further, buildings account for more than 70% of U.S. electricity use, with demands for services such as air conditioning frequently driving peak energy needs and costs. Lastly, Americans spend 90% of their time indoors, making buildings a critical element to comfort, indoor environmental quality, and health and safety. Energy-related building improvements not only

[7] Sources of Greenhouse Gas Emissions | US EPA
[8] WIP-Energy-Burden_final.pdf

reduce energy burden to consumers and overall poverty burden but can also increase building energy control, provide new local workforce opportunities and improve heating and cooling efficiency, indoor comfort and building resilience.

Candidate communities: Candidate communities should have identified opportunities for building improvements focused on energy efficiency and/or beneficial electrification upgrades across groups of buildings in the community. These upgrades can be across different building types such as residential homes in neighborhoods, multifamily and commercial public buildings and/or privately-owned commercial buildings. Applicant communities must have demonstrated commitment from key partners such as state and local government agencies, businesses, schools, building retrofit contractors, and community organizations to participate in building upgrade programs.

Next steps for implementation: At the end of the project period, communities participating in the Energy Efficient Buildings and Beneficial Electrification Planning and Investment pathway will have a plan which outlines a strategy for a building upgrade program/s aligned with meeting the community's overall clean energy vision. Communities with this plan will be well positioned to initiate deployment programs and seek project funding available at the federal, state, and local level.

Clean Transportation Planning and Investment

Background: Transportation has a significant economic impact on American businesses and families; the average U.S. household spends more than 15% of its total family expenditures on transportation, making it the biggest expense for families after housing. This can be up to 30% for lower income households.[9] Improving efficiency and reducing costs in this sector can make a notable impact on a community's economy. Increasing the use of domestic alternative fuels and advanced vehicle technologies can also reduce the emissions that impact a community's air quality and public health. Lower-cost and lower-emission transportation choices that make economic sense for the community will reduce the economic impact of transportation on businesses, families, and individuals and put the community on a more sustainable economic path. Community Clean Transportation and Investment plans may include objectives such as decarbonization, air quality improvement, community access to transportation, workforce development, increased electric vehicle charging availability, and assessing grid capacity for transportation electrification. Transportation is also critical to the overall economy from the movement of goods and people to providing access to jobs, education, and healthcare. In addition, the transportation sector accounts for approximately 30% of total U.S. energy needs and is the largest source of greenhouse gas emissions in the energy sector. Providing cleaner mobility options that are affordable for all Americans is the core objective for the Clean Transportation Planning and Investment pathway.

Candidate communities: Candidate communities must have identified opportunities for transitioning to clean transportation technologies in transport sectors such as transit services, school buses, municipal fleets, freight movement, ports, consumer vehicles. Applicant communities must have demonstrated evidence of commitment and support by sustainable transportation partners, such as businesses,

[9] Transportation Energy Data Book Edition 37, ORNL, Table 10.1 Transportation Energy Data Book: Edition 37 (ornl.gov)

utilities, infrastructure providers, vehicle fleets, state and local government agencies, and community organizations.

Next steps for implementation: At the end of the project period, communities participating in the Clean Transportation Planning and Investment pathway will have a plan with specific clean energy transportation projects working toward a cohesive vision for meeting the community's goals. Communities that have gone through this planning process will be well-positioned to pursue future funding opportunities for transportation deployment projects available at the federal, state, and local levels.

Carbon Capture and Storage

Background: Carbon Capture and Storage (CCS) is regarded as a one of the key pathways for combatting the climate crisis by reducing carbon dioxide (CO_2) emissions from industries that together currently vent billons of tons of CO_2 every year. These emissions accumulate and stay in the atmosphere for decades unless they can be avoided or captured and stored. Certain parts of the country naturally have geologic formations for reliable storage of CO_2. CCS projects can help the United States meet its climate goals while also improving the conditions of communities. Recently enacted incentives such as the amended 45Q tax credit and California's Low-Carbon Fuel Standard support making CCS an economically viable option for some CO_2-emitting industries, which has created a surge in interest in deploying CCS as part of a nationwide effort to transition to clean energy sources and low-carbon industries. DOE's technical assistance providers will provide a high-level assessment of the potential community benefits of a commercial-scale CO_2 storage project from an energy, environmental, and economic standpoint; and evaluate opportunities for federal and state incentives that can generate revenue. The benefit to the community would be providing a pathway to decarbonize their power or industrial emissions that could have a positive impact on human health and economic outcomes in the region. Current jobs could be retained, and new jobs, expertise, and experience with clean energy technologies could be created from future projects.

Candidate communities: Communities producing energy from fossil fuels or home to industries such as cement, steel, ethanol, ammonia, petrochemical products, and others. Ideal candidate communities will contain one or more facilities that could capture CO_2 and be in proximity to a CO_2 pipeline or geologic storage site so that they could act as a CCS hub. Applicant communities must have demonstrated evidence of commitment and support by an industry partner or partners.

Next steps for implementation: At the end of the project period, communities participating in the CCS pathway will have a pre-feasibility study for a CCS project located in the community. Communities can use this completed study to pursue commercial-scale deployment of a CO_2 storage project. Potential sources of funding for a commercial-scale CO_2 storage project could include private and public sector investments in research, development, and deployment that leverage existing policies and incentives.

Energy Site Reclamation and Critical Minerals Processing

Background: Over the past century, energy-related activities have left a legacy of environmental impacts (e.g., mine tailings, ash piles, acid mine drainage (AMD)) in thousands of communities across the country. In many communities, these sites have not been fully remediated and remain a potential threat to the community from an environmental and economic standpoint. In some cases, these waste materials that were left behind can become a valuable resource because they contain critical minerals,[10] including rare earth elements that could help pay for remediation costs, while producing valuable domestic resources needed to support the clean energy transition. Secure and resilient critical mineral supply chains need to be quadrupled in the next 20 years to enable growth in electric vehicles and other clean energy technologies.[11] The benefit to the community would be providing a pathway to improve soil, water and/or air quality that would likely have a positive impact on human health and economic outcomes in the region. Jobs could eventually be created, both at the reclamation site, as well as in the mineral processing plant. Finally, the critical minerals and rare earths will provide economic value for the project, as well as produce supplies of materials necessary for transitioning to a clean energy future.

Candidate communities: Candidate communities will contain one or more sites in need of remediation (e.g., groundwater, waste piles, AMD) or be in a central location so that they could act as a hub for remediation sites. Ideal sites will include communities with existing infrastructure that could be used for concentrating/upgrading low concentration critical minerals found in waste materials to pure or highly concentrated minerals, metals, and rare earth elements. Candidate communities may have a skilled labor workforce, impacted by the clean energy transition, that can run such an operation.

Next steps for implementation: At the end of these activities, the selected communities will have a pre-feasibility study for a remediation and mineral processing project located in the community. This study would provide communities with the information required to decide whether to pursue a commercial-scale project. Potential sources of funding for a commercial-scale remediation project could include private and public sector investments in research, development, and deployment that leverage existing policies and incentives.

Community Resilience Microgrids

Background: A microgrid is a local energy grid with control capability, which means it can disconnect from the traditional grid and operate autonomously. Microgrids can play an important role in supporting economic development and/or community resilience efforts. A microgrid not only provides backup for the grid in case of emergencies, but can also be used to cut costs, or connect to a local resource that is too small or unreliable for traditional grid use. A microgrid allows communities to be more energy independent and, in some cases, more environmentally friendly. Local benefits will differ by community, but may include reduced dependence on distant energy sources, lower electricity bills, greater resilience to cyber threats and natural disasters, improved efficiency and reduced local pollution, and greater local

[10] U.S. Congressional Research Service, Critical Minerals and U.S. Public Policy, R45810 (Washington, D.C.: June 28, 2019).
[11] International Energy Agency Report, The Role of Critical Minerals in Clean Energy Transition, https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf

input into the location and design of infrastructure investments. The goal of technical assistance for the Community Resilience Microgrids pathway is to assist communities with evaluating the suitability of microgrids for the community (including the regulatory, technical, and financial barriers and opportunities); the potential location, size, and composition of a new microgrid; how best to match renewable energy and storage alongside conventional generation to meet a community's most important loads (such as electric, thermal, and water) at the lowest life cycle cost; and the potential for a microgrid to provide power during outages.

Candidate communities: Candidate communities could include: (1) isolated and/or remote communities—including those that are particularly exposed to extreme weather conditions and high energy costs; (2) rural communities that rely on product-driven markets like agriculture or energy that could face dramatic changes in resource extraction, production, globalization, marginalized populations, or environmental impact; and (3) communities with a significant industrial and/or critical infrastructure basis (e.g., economic zones) whose viability is reliant on assured energy reliability/resilience and power quality.

Next steps for implementation: At the end of the project period, communities participating in the Community Resilience Microgrid pathway will have either a plan that outlines a series of investments to meet a community-wide resilience goal, or locally-developed parameters for microgrid projects that provide environmental, economic and/or social benefits to the community. In addition, the community will have either local project development capacity or local leadership and participation structure that can engage directly with externally based project developers.

New or Enhanced Manufacturing

Background: The manufacturing sector is a cornerstone of the U.S. economy; more than 240,000 manufacturing firms employ roughly 8.5% of the workforce and account for approximately 11% of the country's GDP. At the community level, the U.S. manufacturing footprint translates to substantial opportunities for economic growth and millions of high-quality jobs. Manufacturing jobs are particularly impactful for communities, as each manufacturing job creates multiple indirect jobs in other sectors like product and process engineering, design, operations and maintenance, transportation, testing and lab work, as well as in the payroll, accounting, and legal fields. U.S. manufacturers will be critical to producing solar panels, wind turbine blades, batteries, and other technologies key to the country's clean energy transition. At the same time, manufacturing, which currently accounts for approximately one quarter of U.S. greenhouse gas emissions, faces its own decarbonization challenges.

The goal of technical assistance for the New or Enhanced Manufacturing pathway is to assist communities in developing and implementing a strategy to foster a strong, clean, and resilient local manufacturing ecosystem. DOE's technical assistance providers will work with communities to tailor implementation strategies for approaches from existing DOE programs around efficiency, education, and technology adoption to serve the dual purposes of bolstering economic growth and increasing environmental quality through decarbonization.

Opportunities evaluated would include:

- **Resilient Manufacturing.** Assessing competitiveness opportunities by identifying natural resources, existing local capabilities, and industrial infrastructure that would make communities well-suited for a role in the manufacturing supply chain. Communities would benefit from assessments around how they can play a role in the estimated $23 trillion global market for clean energy technologies. Example industries include composite materials for applications in wind, vehicle light weighting, and infrastructure; critical materials needed for energy storage and wind applications; and wide-band gap semiconductors for electric vehicle charging and electrification of heavy equipment.
- **Workforce Development.** Evaluating education and workforce development resources to train a skilled local workforce. Access to a skilled workforce is a key factor in determining an area's attractiveness to new firms, resulting in local job growth. Communities would benefit from recommendations on how partnerships between local manufacturers and community colleges or technical schools could facilitate a local workforce trained in high demand skills. Examples include training for an increasingly digitized and "smart" manufacturing sector, vocational skills, and an understanding of energy management practices.
- **Industrial Decarbonization and Pollution Prevention.** Engaging with existing local manufacturing facilities on energy performance to lower emissions and reduce waste. Communities would benefit from assistance in facilitating the adoption of sustainable and cost-competitive manufacturing practices among their firms. These practices have the added benefit of improving local environmental quality through reduced air pollution. Examples include DOE's existing manufacturing technical assistance programs that provide energy assessments (Industrial Assessment Centers), screening analysis for onsite combined heat and power (CHP) systems (CHP Technical Assistance Partnerships), energy management tools and processes to increase efficiency (Better Plants and Strategic Energy Management programs). The technical assistance that is provided by DOE can be paired with assistance provided by the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnerships (MEPs), which provide subsidized financial consulting services to manufacturing firms. The pairing of energy cost savings with financial expertise can help manufacturing firms appropriately invest savings in measures that help them meet expansion goals. DOE's technical assistance can also serve as a "concierge" to connect manufacturers with other opportunities, such as demonstrating emerging technologies at their facilities, collaborating with national lab innovators, and conducting R&D at cutting edge facilities like the ORNL Manufacturing Demonstration Facility.

Candidate communities: Candidate communities should have existing manufacturing facilities that can serve as the foundation for new or expanded clean energy manufacturing growth, and/or an existing network of supply chain companies that could provide support for new manufacturing in the area. Brownfield sites, or previously shut down industrial properties can provide a prime opportunity for redevelopment. Applicant communities should have a demonstrated commitment to encouraging industrial growth that would be documented and expanded upon during development of the community-driven action plan.

Next steps for implementation: At the end of the project period, communities participating in the New or Enhanced Manufacturing pathway will have a plan to support a resilient manufacturing ecosystem in their community, connections with the manufacturing firms in their community, plans for education and workforce development programs that train skilled workers, and identified supply chains for clean

energy manufacturing processes. Communities can continue to work with local firms on encouraging new technology implementation and continuous improvement of their energy and water use. Continuous improvement also leads to continuous cost savings that can be reinvested into growth. Improved or new education and workforce development activities will be identified and planned to increase the pool of eligible candidates to work in manufacturing.