ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM

Key Activities Summary

Blueprint 3D: Renewable Resource Planning

This Key Activities Summary provides a concise overview of the **Renewable Resource Planning**. DOE plans to provide technical assistance support to all entities who select this Blueprint, which may include one-on-one attention from DOE or national lab experts, webinars, and peer learning opportunities.

blueprints
Energy Efficiency & Conservation Block Grant Program

SCEP
STATE & COMMUNITY ENERGY PROGRAMS

What

Proactive renewable energy planning can facilitate clean energy deployment in a way that aligns with the communities' priorities and maximizes local economic benefits. This blueprint has a particular focus on wind and solar planning, but is not limited to only these technologies. Proactive planning means 1) assessing the renewable resource potential and job opportunities for your area; 2) setting a collective vision with your stakeholders for optimal renewable energy deployment; 3) creating an action plan.

Step 1) Assess the renewable energy market potential to inform your community's strategy and allow you to focus on areas of greatest potential value.

Step 2) Vision setting with your stakeholders will strengthen your community's buy-in and ensure all voices are heard. Key stakeholders may include clean energy industry, internal champions, the electric utility company or cooperative, land-owners or farmers, environmental groups, community leaders, and large energy users like manufacturing facilities.

Step 3) Create an action plan. The renewable resources action plan should establish goals, strategies to maximize workforce and economic development opportunities, and incorporate local priorities. Example actions could consist of developing a list of best places to site solar and wind in your area, or an effort to streamline renewable energy permitting processes to cut red

Renewable projects that may be supported through such a planning process include wind power, community solar (**see Blueprint 3B: Community Solar**), or rooftop solar projects (**see Blueprint 3A: Solar (+Storage) Power Purchase Agreement and Direct Ownership** and **Blueprint 5: Sustainable Financing**). For more details around the benefits of local renewable energy, check out EPA's web page: **Local Renewable Energy Benefits and Resources | US EPA**

Note 1: Community solar projects vary in size, customer type, and business model, and have the unifying characteristics of allowing multiple customers to "subscribe" to receive a portion of the energy generated by a specific solar installation at billing rates associated with that project.

Note 2: A power purchase agreement is a frequently-used type of contract that allows a customer to access renewable electricity without paying the upfront costs of installing the project.

Engaging community members and a variety of stakeholders in the preparation of renewable energy development can ensure everyone has a voice and opportunity to be heard.

Why

Wind and solar generation technologies take advantage of local natural resources and allow rural communities and tribes to reduce their reliance on fossil fuel energy. This enables better local control of energy decisions and reduced exposure to pollution from fossil fuel electricity generation in the rural and tribal communities these resources are located in. Abundant land resources often available in these communities may allow them to take advantage more readily of the numerous economic, development, and health benefits of renewable energy projects. In 2022, the Federated Indians of Graton Rancheria (FIGR) installed 1.5-MW solar photovoltaic (PV) array as part of its regenerative community and economic development approach and a commitment to a 100 percent clean energy future. This first solar PV system will reduce electricity use in the FIGR casino property by about 13%, saving about $400,000 per year and approximately $10 million over the life of the system[1].

The U.S. Department of Agriculture reports “landowners hosting utility-scale PV systems that sell power to the grid receive annual lease payments that are typically $500 to $1,000 per acre,” while “wind energy systems provided rural landowners with $289 million in lease income in 2018.3” Wind and solar can also stabilize local energy costs and enhance energy security as they do not require fuel or other inputs to generate electricity. Renewable energy projects inject money into the local community and provide the opportunity for local high-quality jobs. These projects not only provide high-quality jobs during the construction and operations phase but are a catalyst for training a renewable energy workforce, which is one of the fastest growing labor segments.

[1]Source:
Solar Array Reflects Restored Tribe’s Path to a Brighter Future for All | Department of Energy

1
2
3

Key Activities

These selected Key Activities are suggestions of important steps a government could take to begin or make progress on their renewable energy journey. EECBG Program awardees that utilize a blueprint will receive expedited application review from DOE. Applicants must execute at least one of the key activities listed under each selected blueprint but should avoid going beyond the recommended activities. Going beyond these key activities may trigger additional reviews of your EECBG Program project to ensure you're meeting National Environmental Policy Act (NEPA), historic preservation, and/or other federal regulations. While each step is important, they should be seen as a guide. Awardees should determine their own priority activities based on their local context.

1. **Market Assessment**
2. **Stakeholder Engagement**
3. **Action Plan development**

Market Assessment

Governments should develop a baseline understanding of their area's renewable energy resources and job creation potential. Such analyses and data will inform the creation of an action plan that focuses on the highest priority opportunities that most effectively foster renewable energy deployment and maximize local jobs.

Key Resource

National Renewable Energy Lab (NREL) State and Local Planning for Energy (SLOPE) Tool's data viewer displays clean energy job estimates by State. For example, Florida could grow its clean energy jobs from 24,000 in 2020 to 106,000 in 2030. The SLOPE tool also displays the technical generation potential of various solar photovoltaics (PV) and wind power options. For example, in Michigan, utility scale PV is the resource with the biggest technical potential and distributed wind has the second largest potential.

Key Resource

NREL Jobs & Economic Development Impact Models

Key Resource

The **DOE Wind Exchange Program** hosts several useful tools for wind generation, including the Renewable Energy Potential (reV) Model: **DOE Wind Exchange Program**

If you need extra help with the market analysis, reach out to NREL for one-on-on technical assistance. Email them at **EECS_TA@nrel.gov**.

Stakeholder Engagement

Rural and tribal governments can play a key role in coordinating and facilitating renewable energy education and outreach efforts, and co-create a unifying vision for how the community would like to see renewable energy deployed.

» Proactively engage with key stakeholders to create a collective vision for the community's renewable energy deployment, identifying local job opportunities, community priorities, and any concerns around renewable energy deployment.

» Provide education to community members highlighting economic, health, social benefits, and development impacts from **wind** and **solar**.

» Engage with various permitting authorities and local utilities/cooperatives to understand what it takes for these projects to receive interconnection with the grid; municipal permits, as well as tips on navigating the application and review process. Seek and pursue opportunities streamline any wind or solar development processes, for example by using the **SolarAPP tool**.

» Undergo outreach to landowners and large energy users who may host (or be adjacent to) wind and solar projects, or contract for the energy generated from the project. These entities can provide input on potential project benefits, impacts and opportunities for impact mitigation. Common concerns can be loss of farmland, soil and water impacts, and interference with wildlife grazing, migration, flight or other habits.

Key Resource

Farmer's Guide to Going Solar (DOE)

Action Plan development

Create an action plan that includes the highest impact steps your government can take to foster more renewable energy deployment. Several actions could apply such as the following:

» Research **local regulations and processes** that may support or hinder wind and solar development. Consider expediting permitting processes **for wind**, or solar with the help of the **DOE SolSmart program**. Investigate whether your area allows community solar.

» Identify financial options and sources of funds that could be leveraged to lower barriers to deployment or for construction and maintenance of wind and solar facilities, such as green bank capital loans, revolving loan funds, tax incentives, or PPAs.

» Consider commissioning a preliminary siting assessment to identify the best possible sites for wind or solar projects. Rural and tribal governments can contribute funding and identify public and private sector resources needed to complete more in-depth site analyses. Rank project locations based on available wind and solar resources, social impacts, and environmental impacts. Taking this step will bring your community from an aspirational vision towards preparing for executable projects.

» Address potential community objections or concerns that may come about with project construction, e.g., possible desired design features of the solar/wind projects, like pollinator-friendly vegetation, art, or storm water management.

Key Resource

Understanding Third-Party Ownership Financing Structures for Renewable Energy | US EPA

Key Resource

SolarAPP tool

Key Resource

Solar Installed System Cost Analysis (nrel.gov) Provides an estimated cost breakdown for an installed solar system by size and location.

Key Resource

Transparent Cost Database collects program cost and performance estimates for energy efficiency and renewable energy technologies in a public forum to be viewed and compared to other published estimates. The database includes literature on technology cost, performance estimates, and levelized costs.