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ACCC: RENEWABLES ACCELERATOR PROCUREMENT GUIDANCE: SUMMARY OF METHODS AND DATA

STEPHEN ABBOTT, HEIDI BISHOP RATZ, AND LACEY SHAVER

1. SUMMARY

The American Cities Climate Challenge: Renewables Accelerator website (www.cityrenewables.org, and here-after referred to as "the website") is a resource developed in partnership by World Resources Institute (WRI) and Rocky Mountain Institute (RMI) to help cities procure renewable electricity. It was created as part of Bloomberg Philanthropies' American Cities Climate Challenge (ACCC), a two-year program that provides more than 100 U.S. cities with powerful new resources and access to cutting-edge support to help them meet—or beat—their near-term carbon reduction goals.

As part of the Climate Challenge, WRI and RMI are providing resources and one-on-one technical support to the 25 cities in the ACCC, as well as to cities that are members of the Urban Sustainability Directors Network (USDN). The Renewables Accelerator website is a user-friendly public platform that can be used by a broad array of cities to better understand opportunities for, and challenges related to, renewable energy procurement. The procurement guidance section is a key feature of the website, providing useful resources and important considerations for city sustainability staff as they work to procure renewable energy.

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Technical notes document the research or analytical methodology underpinning a publication, interactive application, or tool.

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This technical note outlines the structure of this procurement guidance section, background on the procurement options it covers, the types of resources that can be found on the website, and our methodology for curating and interpreting these into a platform that provides city staff with a greater understanding of different options for procuring renewable energy.

2. BACKGROUND

All but the most advanced cities lack the knowledge, time, and capacity to find and compile the most reliable and applicable resources—especially given the complex and varied state of energy market structures in the United States. Various leading organizations and institutions have identified and established processes, tools, and best practices for purchasing renewable energy. However, many of these are designed for corporate buyers or other groups and tend not to be assembled together in one location for city audiences.

The Renewables Accelerator website addresses this gap by providing a one-stop shop for city staff, where they can access information on state and market context, procurement options that may be available within a state, and common processes and steps for completing renewable energy transactions. Where possible, the website also provides links to other high-quality resources for users interested in researching further a specific topic.

The procurement guidance section of the website provides a high-level understanding of the following five different, commonly available options that a city might use to purchase renewable electricity:

- Community solar
- Green tariffs
- On-site solar
- Physical power purchase agreements (PPAs)
- Virtual power purchase agreements (vPPAs)

For each procurement option featured on the website, users can view common implementation steps, with links to resources from highly respected institutions such as the National Renewable Energy Laboratory (NREL), the Environmental Protection Agency (EPA), or the Department of Energy (DOE). The five current options should not be interpreted as being comprehensive. Some mechanisms (e.g. energy performance contracts) are not yet featured on the website but may be added in further iterations of the procurement guidance options.

The website is designed to be a user-friendly living repository to help city staff find easily the information and resources that are most relevant to their efforts to purchase renewable energy. It is not a substitute for a detailed analysis of options available to a given city or direct assistance from a consultant specializing in procurement.

3. SCOPE: PHASES FOR PROCURING RENEWABLE ENERGY

Presently, the website features five different procurement options: community solar, green tariffs, on-site solar, power purchase agreements (PPAs), and virtual power purchase agreements (vPPAs). These options were selected because they are commonly available and relevant to cities. As the website is a living resource, other mechanisms for procurement could, and are likely to, be added over time. These updates may include a number of other options, like energy performance contracting.

For each of these five procurement options, the procurement guidance section of the Renewables Accelerator website breaks down into distinct phases the process of purchasing renewable energy. The phases provide a high-level, linear framework that organizes the content into subpages, guiding the user's journey through the website and helping city staff understand the key steps and the primary opportunities, barriers, and issues that they may face throughout the process. Municipal processes may vary according to local priorities and regulations, policies, and other factors; therefore the phases are not intended to be prescriptive or to imply a standardized process.

The phases across the five procurement options are set out in the following list. The first phase outlines a process for city staff to identify their strategy and preferred procurement options and is the same across the five procurement options. The latter phases are tailored to the individual procurement option and discuss key steps for implementation.

For example, the phases for on-site solar are as follows:

1. **Getting started.** Before selecting a procurement option, city staff should plan to invest some time to understand fully their community's energy goals,

priorities, needs, and limitations. After collecting this information, city staff should evaluate and prioritize renewable options on the basis of which are available in their local regulatory context and which align with the city's motivations, goals, and timeline.

2. **Build your on-site solar team.** Having selected on-site solar as a procurement option, city staff should research key considerations such as building codes, incentives, and system size restrictions. Staff should assemble a team with the necessary skills to execute the transaction; this team may include external consultants, lawyers, or other specialists.

3. **Identify project sites and solar potential.** At this stage, city staff should focus on identifying potential opportunities for on-site solar by assessing municipal building portfolios, prioritizing sites, and gathering utility-specific details.

4. **Understand project economics and potential ownership structure.** To assess options, city staff should gather information on different ownership models and installations through a "Request for Proposal" process.

5. **Run the solicitation process and sign the contract.** Once the full range of options has been evaluated, city staff should choose their preferred transaction and sign the contract(s).

6. **Monitor progress and share your story.** After the contract has been finalized, city staff can monitor the project's progress and determine how best to communicate their efforts to the broader community.

From the primary landing page for each procurement option, users can view key activities that cities might consider undertaking, review the expected outputs of each phase, and access links to the most relevant external resources and tools for that phase of the process.

4. METHODOLOGY AND CRITERIA FOR RESOURCE SELECTION

A team of experts from across WRI and RMI carefully selected referenced resources. The Renewables Accelerator team considered the following criteria when deciding which external resources to reference within each of the procurement guidance sections:

- **Organizational credibility of the author.** The team selected resources that were produced by well-regarded, credible authors and organizations. The team prioritized resources from organizations with peer review processes and/or those that worked with city governments to develop the resources. Further, the team prioritized resources that were produced by U.S. governmental agencies such as NREL, EPA, and DOE.

- **Relevance.** The team prioritized those resources that were designed specifically for renewable energy buyers. Where possible, resources that were developed for city audiences were selected, and all were evaluated to ensure that they were sufficiently current or up-to-date.

- **City input.** The team considered the input of experienced city officials on which resources they found most valuable when implementing renewable energy projects and consulted representatives from the Urban Sustainability Directors Network (USDN), a national member network of local government sustainability staff. More information on city staff consulted in the process can be found in section 5 of this technical note.

- **Expert input.** The team also considered input from industry experts outside city governments. These included external consultants and nonprofits that were familiar with city renewables procurement implementation.

The Renewables Accelerator team will update the selected resources on an ongoing basis to best reflect the needs of cities and the current state of renewable energy procurement research.

The following list provides examples of resources selected at the time of the procurement guidance launch, as well as descriptions of how they meet the criteria outlined herein:

■ *Guidance for Setting a Renewable Electricity Goal: A Framework to Help Municipalities Achieve Their Objectives* (EPA 2018):

- ☐ **Resource type.** This guidance document provides a framework for why and how a municipality might set a renewable electricity goal and discusses the key considerations and benefits of doing so.

- ☐ **How the resource is referenced on the website.** "Phase 1: Getting started" links to this resource as a tool to help "Evaluate potential goals."

- ☐ **Rationale for including the resource:**

  - ▶ **Organizational credibility.** This resource was prioritized due to the EPA's reputation for providing quality resources on renewable energy purchasing, as well as the credibility of other linked resources in the publication, including NREL, USDN, Database for State Incentives for Renewable Energy & Efficiency (DSIRE), and the National Conference of State Legislatures (NCSL). Additionally, EPA and other government documents are subject to lengthy peer review processes.

  - ▶ **Relevance.** This resource was developed specifically for a city government audience and includes a worksheet for renewable energy goal-setting.

  - ▶ **City input.** Not only does the resource incorporate material from cities themselves close but it is widely used among industry experts.

■ *Clean Energy Business Model* (C40 2018):

- ☐ **Resource type.** This manual sets out different business models and financial instruments for procuring or incentivizing renewable energy within a city. It presents administrative and financial structures, applications for various regulatory contexts and market conditions, advantages and disadvantages, and case studies from C40 cities—a network of cities committed to addressing climate change.

- ☐ **How the resource is referenced on the website.** "Phase 1: Getting started" links to this source as a tool when you "Identify your options." It provides short case studies from around the world, including U.S. examples.

- ☐ **Rationale for including the resource:**

  - ▶ **Organizational credibility.** This publication is a highly relevant, C40 city-led explainer released at the end of 2018. C40 produces technical reports that are widely used by urban planners and renewable energy procurement experts. The organization also has a history of successful resource development. For example, C40 collaborated with WRI on the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC), which is the gold standard for emissions measurement used by the Global Covenant of Mayors for Climate and Energy.

  - ▶ **Relevance.** This resource provides city staff with a highly relevant manual that outlines key considerations for financial instruments and procurement.

  - ▶ **City input.** City government voices were consulted and feature prominently in this source—for example, as city case studies and quotes.

■ *Pathways to 100: An Energy Supply Transformation Primer for U.S. Cities* (Cadmus 2017):

- ☐ **Resource type.** This primer provides an overview of regulatory considerations and renewable energy policies and strategies for U.S. cities.

- ☐ **How the resource is referenced on the website.** "Phase 1: Getting started" links to this resource as a tool to "Identify your options." It helps city staff understand the state-specific regulations affecting procurement and supplements the website's renewable options by state pages.

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☐ **Rationale for including the resource:**

- ▶ **Organizational credibility.** This resource was selected because of the organizational credibility of Cadmus and the other partners involved in its development (for example, USDN—an important partner of the Renewables Accelerator).

- ▶ **Relevance.** Industry experts and cities use the resource widely, reaffirming its value for the website.

- ▶ **City input.** This tool is highly relevant as it was designed for city renewable energy purchasers with specific input from cities (including Portland, Oregon, and Los Angeles, California).

5. USER TESTING

During the design of interactive website features, the Renewables Accelerator team sought advice from both WRI and RMI content experts, web development staff, and communications staff. The team also consulted individuals from USDN who have specific insights into city needs, challenges, and constraints related to renewable energy procurement.

The team collected feedback from a representative subset of potential users. This included local government staff from a range of geographic locations and with varying procurement experience—anything from no solar procurement experience to ten or more years. These users provided feedback on the website, including the procurement phases, structure, selected resources, and overall site accessibility, look, and feel. This helped the team refine the content of the procurement guidance as well as the lists of external resources provided in each section.

For each procurement option, the web text and resources underwent detailed external reviews by staff from at least two local governments who could speak to the procurement process and phasing level of technicality and to the quality of the resources. These city government staff received full web text and content for one procurement option and were asked to provide high-level commentary and feedback, to edit text as needed, and to review the resources according to the four selection criteria. They were also asked to suggest resource additions and deletions. Staff from the following jurisdictions provided review:

- ■ **Community solar:** Boulder, Colorado, and Cambridge, Massachusetts

- ■ **Green tariffs:** King County, Washington; Minneapolis, Minnesota; and Salt Lake City, Utah

- ■ **On-site solar:** Orlando, Florida, and San Diego, California

- ■ **PPAs:** Houston, Texas, and Philadelphia, Pennsylvania

- ■ **vPPAs:** Alexandria, Virginia, and Boston, Massachusetts

In addition to the web content and resource review, the web team also sought external user review of the accessibility and appearance of the website from staff representing cities not mentioned in the previous list. The team held interviews and website walk-throughs by phone and in person as part of a Renewables Accelerator "bootcamp" to further refine the functionality and design of the site. Interviewees were asked questions such as the following:

- How do you currently gather information about renewable energy?
- What resources or websites do you visit to learn about renewable energy?
- What does this website appear to be about? Who is it for?
- Does the functionality of the website make sense? Would you move anything around?
- What is your impression of the procurement guidance section of the website?
- How easy is the procurement guidance section of the website to navigate?
- What do you think of the level of technicality?
- Is anything missing? Is there anything else you'd like to add?

6. UPDATE SCHEDULE

After the launch of the procurement guidance webpages, the Renewables Accelerator team will continue to engage with a large network of U.S. cities through a series of discrete workshops and ongoing support. During these interactions, the team will further explore what additional external resources or other improvements would be most useful to cities and would best enable them to move forward with their renewable energy projects.

The website will be updated on an ongoing basis throughout the program's lifespan to accommodate the evolving field of renewable energy procurement options and good practices. The web team meets weekly to address website development updates and potential new content. A full website review of all content will be conducted every six months to assess the status of resources and data on the site. During these reviews, content that is considered out of date or no longer relevant will be removed, and any new resources that meet the criteria listed in this technical note will be added. The team will also work to ensure that content accounts for current legislation and other factors.

7. LIMITATIONS

The procurement options listed on the website represent those that are considered most widely available and applicable to U.S. cities and towns by procurement experts. However, some of the methods may not be available in a given state or utility service territory due to legislative, regulatory or other barriers. City staff may use the renewable options by state pages of the website as a starting point for determining available procurement options.

Before starting any projects, users are encouraged to always check with their legal teams regarding the feasibility of procurement options within their state. City staff may also want to consider consulting a renewable energy specialist or hiring a "buyer's representative" to help with the financial analyses and evaluation of relevant procurement options.

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ABOUT THE AUTHORS

Lacey Shaver is the City Renewable Energy Manager within the global energy program at World Resources Institute. In this role, she is expanding WRI's work with corporate buyers and utilities on innovative renewable energy procurement and decarbonization efforts into U.S. cities. She organizes and supports cohorts of cities working on similar purchasing strategies, develops tools and guidance, organizes trainings, and supports peer learning events to help cities secure renewable energy to decarbonize their electricity supply.

Contact: lacey.shaver@wri.org

Heidi Bishop Ratz is the U.S. Electricity Markets Manager, working across the Energy and Climate programs at WRI. She provides project management, partner engagement, and research to drive the transition to a low-carbon economy in the United States. This involves research and analysis to support WRI's existing and emerging U.S. energy initiatives related to deep decarbonization, electricity market design, innovative utility regulatory policy, and/or promotion of zero- and low-carbon energy, demand response, energy storage, and energy efficiency.

Contact: heidi.bishop@wri.org

Stephen Abbott is a manager within the Carbon-Free Cities and States program at Rocky Mountain Institute, a nonprofit based in Colorado. Since joining RMI in August 2013, Stephen has worked with large organizations interested in purchasing renewable energy. Before beginning his work with cities, Stephen developed a renewable energy strategy for a large university and subsequently helped launch the Business Renewables Center, a member-based platform that streamlines and accelerates corporate purchasing of off-site, large-scale wind and solar energy. In 2018, Stephen helped launch a similar initiative focused on city renewable energy procurement where he now leads the team's efforts to develop guidance and tools for local governments.

Contact: sabbott@rmi.org

ABOUT WRI

World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.

Our Challenge

Natural resources are at the foundation of economic opportunity and human well-being. But today, we are depleting Earth's resources at rates that are not sustainable, endangering economies and people's lives. People depend on clean water, fertile land, healthy forests, and a stable climate. Livable cities and clean energy are essential for a sustainable planet. We must address these urgent, global challenges this decade.

Our Vision

We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.

Our Approach

COUNT IT

We start with data. We conduct independent research and draw on the latest technology to develop new insights and recommendations. Our rigorous analysis identifies risks, unveils opportunities, and informs smart strategies. We focus our efforts on influential and emerging economies where the future of sustainability will be determined.

CHANGE IT

We use our research to influence government policies, business strategies, and civil society action. We test projects with communities, companies, and government agencies to build a strong evidence base. Then, we work with partners to deliver change on the ground that alleviates poverty and strengthens society. We hold ourselves accountable to ensure our outcomes will be bold and enduring.

SCALE IT

We don't think small. Once tested, we work with partners to adopt and expand our efforts regionally and globally. We engage with decision-makers to carry out our ideas and elevate our impact. We measure success through government and business actions that improve people's lives and sustain a healthy environment.