RENEWABLE ENERGY PROCUREMENT—A Guide for Advocates and Policymakers

For advocates and policymakers looking to enable local renewable energy procurement for buildings, it can be confusing to determine what policies and programs to advance. The ***Zero Code Renewable Energy Procurement Framework*** (ZCF) simplifies renewable energy procurement decision-making. This guide introduces the ZCF and provides an overview demand-side renewable energy policy options and considerations to help determine an appropriate strategy for any community. This resource is for local advocates and policy makers seeking to decarbonize the building sector through policies targeted at end-users of energy, or "demand-side" options.

THE ZERO CODE RENEWABLE ENERGY PROCUREMENT FRAMEWORK

The ZCF is a flexible policy framework for jurisdictions seeking to ensure the energy needs of buildings are met by renewable energy resources. The ZCF can be advanced through building codes, zoning regulations, municipal codes, incentive programs and other means. The framework is designed to be both plug-and-play and highly flexible and adaptable for jurisdictions to use.

UNDERSTANDING YOUR CONTEXT

Because our electricity system continues to rely on fossil fuel sources like gas and coal in many parts of the country, demand-side renewable energy policies like the ZCF are an essential tool in any policymaker's toolbox. Demand-side renewable energy policies support buildings in eliminating greenhouse gas (GHG) emissions by generating or procuring renewable energy-based electricity sources. This can include on-site renewable energy production or the purchase of electricity from off-site renewable energy sources like solar, wind, and hydroelectricity.

Demand-side renewable energy policies work alongside building electrification requirements and energy efficiency improvements, and complement utility and state renewable energy efforts, to completely decarbonize the building operations.

The ZCF provides a flexible and adaptable means for communities to enable renewable energy procurement for new construction and existing buildings. There are a ***variety of pathways*** through which cities and states can adopt any aspect of the framework. To determine the best path forward, it is important to understand what is already in motion in your area. Below, you will find a series of questions designed to help you identify local policy considerations that may impact which pathway will make the most sense in your community.

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What has your local jurisdiction already done?

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Most jurisdictions have sustainability goals and action plans. What actions or promises have been made by your city, county, utility, and state? How about neighboring jurisdictions?

Resources:

- *Engagement Tracker*
- *Transaction Tracker*
- Your local environmental advocacy organizations
- Your state energy or natural resource office
- Your city or county sustainability or environmental office
- Your municipal utility

Examples:

- *Sacramento Municipal Utility District*
- *City of Kansas City, MO*
- *State of Washington*

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What is your current mix of electricity generation?

Electricity is generated from a variety of resources. Understanding the current mix of sources is important because it determines the GHG intensity of your electricity consumption. Areas powered by hydroelectricity have little to no emissions, compared to coal plants, which have high GHG intensity. Therefore, it is ideal for renewable energy assets to be developed in areas with GHG-intense power plants to offset more pollution.

Example:

- *CA ISO*

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Does your state have a Renewable Portfolio Standard (RPS) or a Clean Energy Standard (CES)?

Many states have adopted RPSs, which require a specified percentage of the electricity sold by utilities to come from renewable resources. Some states have a CES, which specifies "clean" sources of energy, as opposed to "renewable" sources of energy. "Clean" refers to any resource that has zero emissions (allowing for nuclear), while "renewable" may allow for emissions from some resources, like biomass. These standards are important because they drive the market for wind, solar, and other renewable energy sources. They also diversify the energy mix, promote economic growth, and reduce emissions. The ZCF is a tool that can help states reach their RPS goals, or go above and beyond them.

Resource:

- *State Renewable Energy Portfolios Standards and Goals*

Example:

- *Massachusetts RPS*

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Does your state or utility have an Integrated Resource Plan (IRP)?

Most regulated, investor-owned utilities have a planning process to meet future energy demand. These are most commonly called IRPs but may have other names. IRPs are important because they provide an understanding of the state's perspective on a range of issues, including energy efficiency, electrification, and how to meet future demand and requirements. Most IRP processes allow for public input, providing the opportunity to influence the future electricity generation resources.

Examples:

- *15 Local Governments Join Together*
- *IRP - Xcel Energy, Colorado*

Resources:

- *Integrated Resource Plan*

Consult the ***American Cities Climate Challenge Renewables Accelerator - Engagement Guidance*** for more guidance on understanding your local mechanisms for change.

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RENEWABLE ENERGY CERTIFICATES (RECS)

In the ZCF, a building must procure newly-added RE power or Renewable Energy Credits (RECs) to meet the building's power demand. One REC is generated when one megawatt-hour (MWh) of electricity is generated and delivered to the grid by a renewable energy resource. A REC is a market-based asset that quantifies the environmental attributes of renewable energy. RECs are an intangible asset that can nonetheless be owned. There are two main reasons that RECs have value:

1. ***If a party wants to support renewable energy, purchasing RECs is an option.***
2. ***Purchasing RECs can be a way for utilities to comply with the RPS in their jurisdiction (see RPS above).***

RECs are purchased in a REC marketplace, like ***Green-e***. They can be bought and resold. It is only when a REC is "retired", or removed from the marketplace forever, that a party can claim the environmental benefits associated with that REC. More detail on the ***REC marketplace***.

SEVEN RENEWABLE ENERGY PROCUREMENT METHODS

Renewable energy (RE) procurement is the process of adding new RE generation to the electric grid in a way that supports energy demand from new or existing buildings. All procurement methods provide electricity to the grid, not directly to the building (the only exception is onsite solar). They also provide a way of tracking the quantity of RE electricity and its environmental attributes (i.e., Renewable Energy Certificates). There are seven distinct RE procurement methods, and the following table provides an overview of all methods so you can quickly determine their feasibility and appropriateness for your local community. A one-pager is available for each procurement method. Each method's title is linked to its worksheet.

AT A GLANCE

	METHOD 1 DIRECT OWNERSHIP	METHOD 2 GREEN RETAIL TARIFFS	METHOD 3 POWER PURCHASE AGREEMENTS	METHOD 4 COMMUNITY RENEWABLES	METHOD 5 RENEWABLE ENERGY INVESTMENT FUNDS (REIF)	METHOD 6 UTILITY RENEWABLE CONTRACT	METHOD 7 UNBUNDLED RENEWABLE ENERGY CERTIFICATES (RECS)
HOW IS THIS METHOD DEFINED?	The building owner controls RE generation either on-site or off-site.	The retail electricity provider offers 100% renewable energy to their customers.	The building owner and the RE developer sign a contract that guarantees a minimum price (the strike price) for the RE sold into the grid.	A group of customers buys or leases energy assets from a RE developer.	The building owner does not procure any RE. Instead, they pay into a fund for sustainable and/or equitable RE development that is managed by a third party organization, usually including local government.	A one-off arrangement between an electric utility company and high-demand customers.	The building owner purchases certificates representing the environmental benefits from the generation of renewable energy.

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WHO DEVELOPS THE RE ASSET?	The building owner.	Electric utility company or an entity with whom they contract.	A third party RE developer.	Electric utility company or a third party RE developer.	The REIF.	Electric utility company or entity they contract with.	Third party RE developer.
WHO LEASES OR OWNS THE RE ASSET?	The building owner.	Electric utility company.	A third party RE developer.	"Community" = A group of individ-uals, businesses, non-profits, or other groups.	The REIF.	Electric utility company or entity they contract with.	N/A. The RE asset ownership is unbundled from the RECs.
WHERE IS THE RE RESOURCE LOCATED?	A site owned or leased by the building owner.	Land owned or leased by the electric utility company or entity they contract with.	Land owned or leased by the RE developer.	Site agreed upon by the electric utility company and RE developer.	Usually in the community.	Land owned by the electric utility company or entity they contract with.	The marketplace.*
WHO GETS FINANCIAL CREDIT FOR THE RE?	Building owner receives credit for electricity sold.	Building owners buy RE, usually at a premium.	RE developer receives market price compensation for electricity flowing to the grid. PPA buyer compensates seller and receives credit for electricity sold at higher price.	Community receives electric bill credits.	Buyers purchase electricity from electric service provider, the same as others not participating in the REIF.	Varies depending on contract.	N/A**

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WHAT HAPPENS TO THE RECS THAT ARE GENERATED?	Owner / developer retains and retires generated RECs.	Typically retained by the electric utility company, but some programs credit the REC to the electric utility customer, which is required for ZCF credit.	Provided to or retired on behalf of the buyer.	Usually retained or retired by the RE developer, but the RECs must go to the building owner for ZCF credit.	Provided to or retired on behalf of the buyer.	Provided to or retired on behalf of high-demand customer.	Sold independently.
HOW PERMANENT IS THE COMMITMENT? (IS IT DURABLE?)	It is possible that the owner could sell their RE resources. A forward contract for the RECs can help provide durability.	It is very easy for the building owner to opt-out of this procurement method, threatening durability. Forward contracts can establish a long-term commitment, ensuring durability.	Long-term contracts are a requirement of PPAs, making them very durable.	Varies by program. Most programs are easy to opt out of which threatens the durability of Community Renewables.	Contribution can be an upfront payment (high durability) or a subscription.	Contracts are written for the long-term, ensuring durability.	Forward contracts can be used to establish a long-term commitment, ensuring durability.

**There are different REC marketplaces, some sorted by geography, source (e.g. Solar REC) and other criteria (e.g. Class 1 Massachusetts RECs).*

***With energy certificates, electricity is independent from the asset and therefore there is no financial credit. RECs have a price that varies on its marketplace.*