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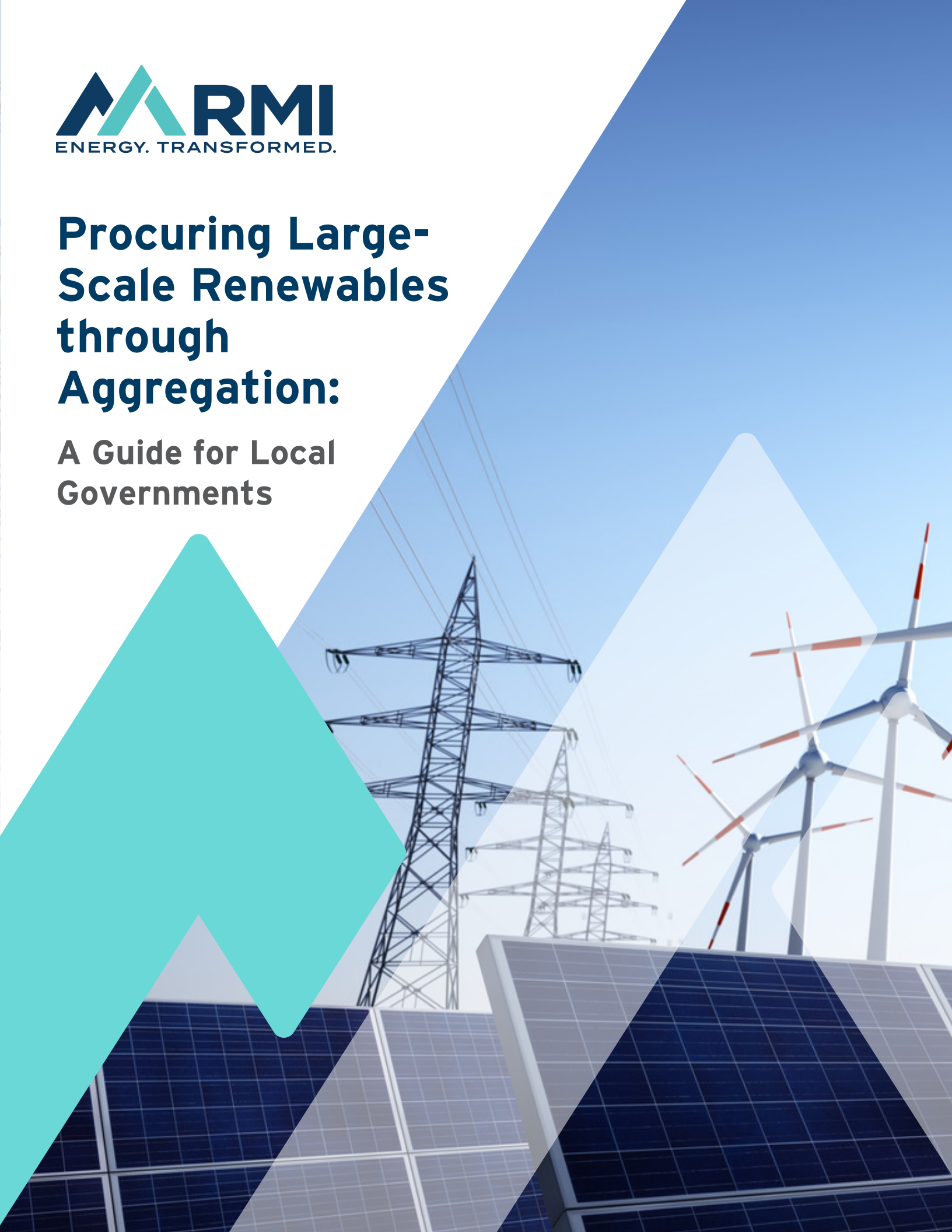
Procuring Large-Scale Renewables through Aggregation:

A Guide for Local Governments



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About Us

About RMI

RMI is an independent nonprofit founded in 1982 that transforms global energy systems through market-driven solutions to align with a 1.5°C future and secure a clean, prosperous, zero-carbon future for all. We work in the world's most critical geographies and engage businesses, policymakers, communities, and NGOs to identify and scale energy system interventions that will cut greenhouse gas emissions at least 50 percent by 2030. RMI has offices in Basalt and Boulder, Colorado; New York City; Oakland, California; Washington, D.C.; and Beijing.

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Executive Summary

Local governments across the United States are setting ambitious goals to transition to renewable energy. Off-site renewable energy purchases can be an essential component of a local government's decarbonization plan since most municipalities cannot supply 100% of their electricity needs with on-site supply alone.

Aggregation is an innovative yet underutilized approach in which two or more buyers collaborate to purchase energy from a large-scale generation facility. Aggregated deals can provide several additional advantages to buyers:

- Aggregation allows them to support new renewable energy projects that meet their specific needs.
- It helps grow the demand for renewable energy by enrolling participants who lack the resources or electricity demand to sign large-scale contracts on their own.
- Buyers can collectively negotiate for better contract terms and prices.

This guide outlines a seven-step process for local governments to pursue an aggregated transaction:

1. Lay the groundwork in each participating organization
2. Form a procurement group
3. Align on desired project details
4. Start the procurement process
5. Select suppliers
6. Negotiate contract terms, get final approval, and sign separate contracts
7. Share success

Introduction

Aggregated large-scale renewable procurement (aggregation) is a way for two or more buyers to procure energy from a utility-scale generation facility. Aggregated procurements can provide many benefits to buyers, including better contract terms and prices than if they were to pursue a deal alone.

Historically, renewable energy suppliers have found and aggregated buyers to purchase energy from a project. This is known as supplier-led aggregation, in which the renewable energy developer identifies and secures a project location, negotiates contracts with several offtakers independent of each other, and then uses the signed power purchase agreements (PPAs) to raise financing. Since buyers are not able to coordinate among themselves, each offtaker must negotiate its own contract terms and prices, increasing transaction costs and, in some cases, prices.

Buyer-led aggregation is an innovative, yet underutilized, approach buyers have started to use more frequently in the past five years when pursuing PPAs for renewable energy. In a buyer-led process, multiple buyers form a procurement group. The procurement group identifies desired project attributes, finds a supplier and project(s) that meets these requirements, and enables each participant to sign separate, but similar, contracts. A buyer-led deal presents several opportunities for buyers:

- It allows them to support new renewable energy projects that meet their specific needs.
- It helps grow the demand for renewable energy by enrolling participants who lack the resources or electricity demand to sign a contract on their own.
- Buyers can collectively negotiate for better contract terms and prices.

This guide outlines how local governments can pursue buyer-led aggregated PPAs for utility-scale renewable projects.[i] The first section includes an overview of key information for buyers interested in pursuing aggregation, including the benefits of aggregation, off-site procurement options available to aggregation groups, and case studies of five successful aggregated renewables procurements. The second section presents a seven-step process to guide local governments to pursue an aggregated procurement.

[i] The type of aggregation discussed in this paper, in which multiple local governments jointly pursue contracts with a utility-scale generation facility, should not be confused with community choice aggregation (CCA). CCA enables local governments to procure power on behalf of their residents, businesses, and municipal accounts, and is only possible in municipalities that have a state law authorizing CCA and that have passed enabling local legislation.

Key Information for Aggregated Power Purchase Agreements

Local governments interested in aggregated large-scale renewables procurements may begin this process with a range of prior experience with and knowledge about renewables procurement. This section presents key background information for local governments interested in aggregated renewables procurements including the benefits of aggregation, an introduction to physical and virtual PPAs, and five case studies of successful aggregated procurements.

Benefits of Aggregation

As more local governments set goals to transition to renewable energy, buyer-led aggregation presents a way for them to access many benefits that they would not otherwise be able to access on their own. Buyer-led aggregation can have (1) a bigger impact, (2) better economics and prices, (3) lower risk, and (4) positive network effects and compelling communications.

Aggregated purchases have a bigger impact.

By pooling the electricity demand for multiple local governments, aggregated deals allow participants to collectively enable a significantly larger energy generation facility than any one buyer would be able to support individually. Moreover, aggregation can enable participation from smaller energy users that, on their own, are not able to purchase enough electricity to warrant the attention from developers, thereby further increasing the group's impact. This is particularly important for smaller communities with 100% renewable energy goals, as most municipalities cannot supply 100% of their electricity needs with on-site generation alone. This makes an off-site procurement an essential component of their decarbonization strategy.

In addition to helping local governments meet ambitious renewable energy goals, adding larger, utility-scale renewables to the grid can also provide additional community benefits. Depending on the project's location, a new large-scale renewable facility can create local jobs, increase a community's revenues and tax base, and provide community health benefits by accelerating coal plant retirements.[1]

Furthermore, larger, collective efforts can send a more powerful signal to utilities, policymakers, and developers that local governments are serious about rapidly decarbonizing the electricity system.

Aggregated deals have better economics and prices.

Aggregated deals can reduce prices for buyers by unlocking greater economies of scale and reducing transaction costs.

Groups of buyers acting together can support larger projects in which greater economies of scale can enable lower PPA prices. This connection between scale and prices has been well documented; the National Renewable Energy Laboratory's solar cost benchmark shows that procuring 100 MW of solar instead of 10 MW can reduce development costs per watt by 16%.[2]

Aggregated transactions can also reduce costs for both the developer and buyers. By eliminating the need for the developer to identify several offtakers and negotiate separate, independent PPA contracts, buyer groups can reduce development costs and, potentially, the quoted electricity price. Moreover, local government aggregation groups can reduce the workload and cost imposed on any one participant by pooling their knowledge and expertise, sharing the cost of hiring external experts (e.g., lawyers, accountants, or consultants), and divvying up responsibility for procurement-related tasks.

Finally, aggregated deals can provide a lower-cost mechanism for local governments to purchase renewable energy credits (RECs), leading to further cost savings. For example, Arlington County, Virginia, will save approximately $30,000 each year in REC expenses when it begins receiving RECs from a virtual PPA in 2022.[3]

Aggregation can lower risk for all buyers.

Aggregation can allow participants to reduce their financial and contractual risks. Large-scale renewable transactions, which provide predictable pricing over 10–20 years, can reduce buyers' exposure to increases in energy prices due to market shifts, supply shocks, or added costs from a carbon tax.[4] Aggregation can further reduce buyers' risks by allowing the consortium to purchase energy from multiple projects spread across several locations and resource types. This project diversification can allow buyers to create a portfolio that, like mutual funds do in financial investing, limits buyers' exposure to and reliance on any one project, providing greater stability.

Moreover, having multiple buyers review and negotiate the same contract can help ensure that the contracts are structured properly and that each participant receives the best terms and conditions possible.

Aggregation creates positive network effects and compelling communications opportunities.

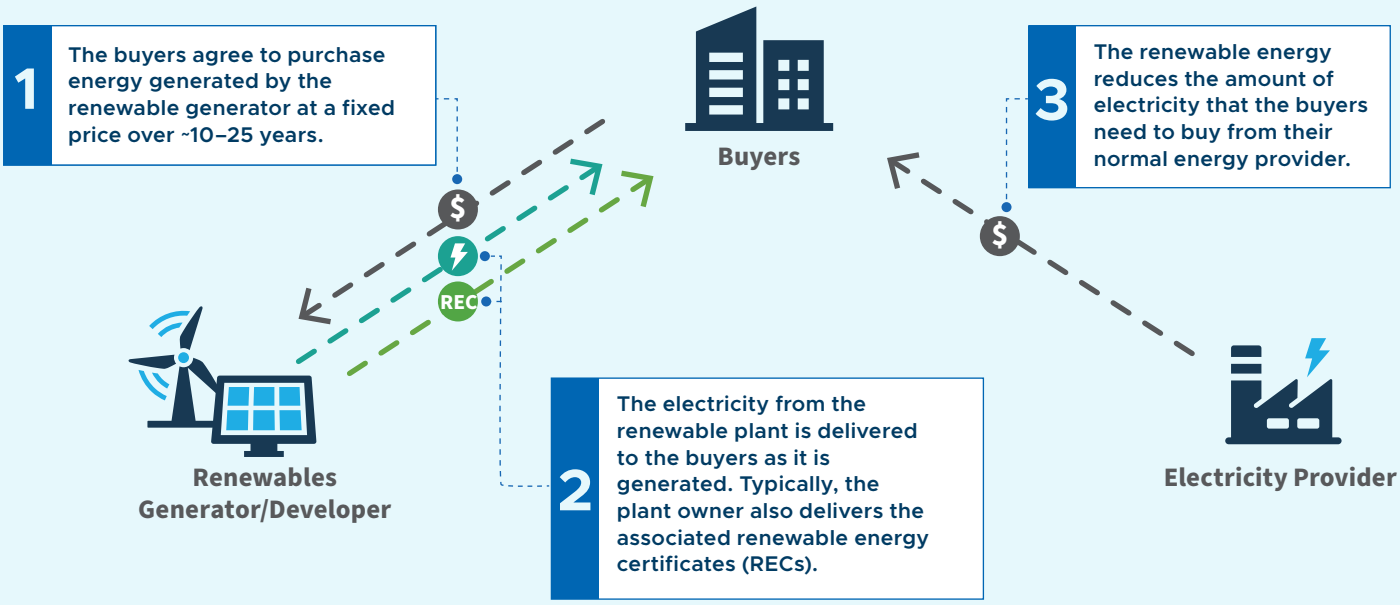
Aggregated procurement groups create a shared experience among participants and can generate positive network effects, including increased mentorship, increased credibility, and support for inexperienced buyers. The connections formed within aggregation groups often persist beyond the initial transaction and, in some cases, lead to subsequent group efforts. In several cases, members of aggregated deals have gone on to complete additional procurements together or with additional partners. Lastly, the size and novelty of aggregated deals can garner additional media attention, allowing members to highlight their own efforts and encourage their peers to pursue similar efforts.

How It Works (Procurement Options)

There are two primary contractual structures used in aggregated transactions: off-site physical PPAs and virtual PPAs.

Physical Power Purchase Agreements

Exhibit 1 How an Aggregated Physical Power Purchase Agreement Works

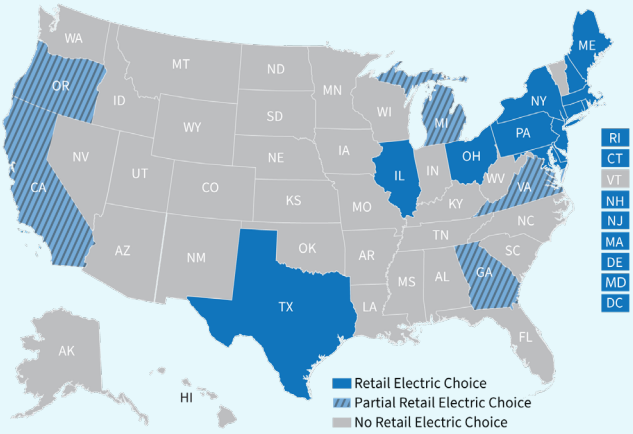


With a **physical PPA**, buyers purchase electricity from a utility-scale, off-site renewable energy generator to use at their facilities.[5, ii] For "physical delivery" to be possible, the renewable resource needs to be located in—or have access to—the same wholesale market as the buyers. While buyers do not need to be located in the same state, it can be helpful for them to be relatively close together (e.g., within the same distribution utility area). This avoids issues relating to transmission costs or other constraints that may cause the price of energy from any given project to differ significantly across buyers.

Exhibit 2 Map of Wholesale Electricity Markets and States with Retail Electric Choice

Wholesale Electricity Markets

States with Retail Electric Choice



Source: Reprinted with permission of the ISO/RTO Council, from **https://isorto.org**, accessed June 24, 2021 (left); reprinted with permission of the National Renewable Energy Laboratory, from **https://www.nrel.gov/docs/fy18osti/68993.pdf**, accessed June 11, 2021 (right)

Depending on state regulations, buyers can have up to three options to receive, or "take delivery of," the energy from a physical PPA. Local governments served by vertically integrated, monopoly utilities are only able to work with their traditional utility. However, local governments in retail choice markets, or those served by municipal utilities or community choice aggregators (CCAs), may work with a competitive retail supplier or manage the delivery themselves. While buyers in an aggregated deal do not necessarily need to pursue the same delivery option, it is generally easiest and more cost-effective to do so.

Working with a Traditional Utility

A traditional utility may agree to deliver, or "sleeve," the energy from the physical PPA to the buyer, usually in exchange for a fee ($/kWh) incorporated into buyers' electricity bills.[iii]

Considerations:

- Working with a traditional utility is much easier if all buyers are served by the same traditional utility. Otherwise, the group will need to negotiate with multiple utilities.
- Groups interested in this approach should engage with the utility early in the process, ideally months before issuing a request for proposal (RFP). In some cases, the utility may choose to issue the RFP on the group's behalf.
- For buyers served by integrated, regulated utilities, this is the only option to receive power from a physical PPA. If the utility does not agree to deliver the power, groups should consider a virtual PPA.

[ii] Physical delivery of the power can occur at locations other than a buyer's facilities. However, since most purchasers sign these deals with the intent of using the generated electricity, this report assumes that physical PPAs entail physical delivery to buyers' locations.

[iii] Physical PPAs are also referred to as "sleeved PPAs" because a utility or third party delivers, or "sleeves," the power from the project site to the buyer.

Working with a Competitive Retail Supplier

Buyers in states with retail choice can sign a contract with a retail supplier to integrate the energy from a project into their electricity service.

Considerations:

- A key benefit of this approach is that the retail supplier takes on the responsibility of delivering the renewable electricity and, often, managing mismatches over time between buyer energy needs and the output of the project(s).
- If buyer(s) already work with a retail supplier, buyer(s) can ask them to deliver the power from the physical PPA at any time. Or buyer(s) can discuss physical PPA power delivery during contract negotiations with a new or existing retail supplier.
- Not all buyers need to use the same retail supplier, but suppliers may prefer this as it simplifies contract negotiations and can bring them additional business.
- In some cases, a retail supplier may be willing to issue the RFP on the group's behalf.

Managing One's Own Power

Buyers can also integrate a physical PPA into wholesale market operations via a wholesale market subaccount or as a Federal Energy Regulatory Commission (FERC) licensed power marketer.[iv]

Considerations:

- Some local governments may choose to purchase electricity through the wholesale market if they are registered as a FERC licensed power marketer, or through a retailer using a dedicated subaccount. This approach brings additional complexity and risk but can reduce non-PPA electricity costs.
- Local governments that participate in wholesale markets have the option to integrate a physical PPA into their current processes.
- Not all buyers need to opt-in to this approach, but it may be more cost-effective for groups to share the costs associated with hiring staff or third parties to manage the market operations.

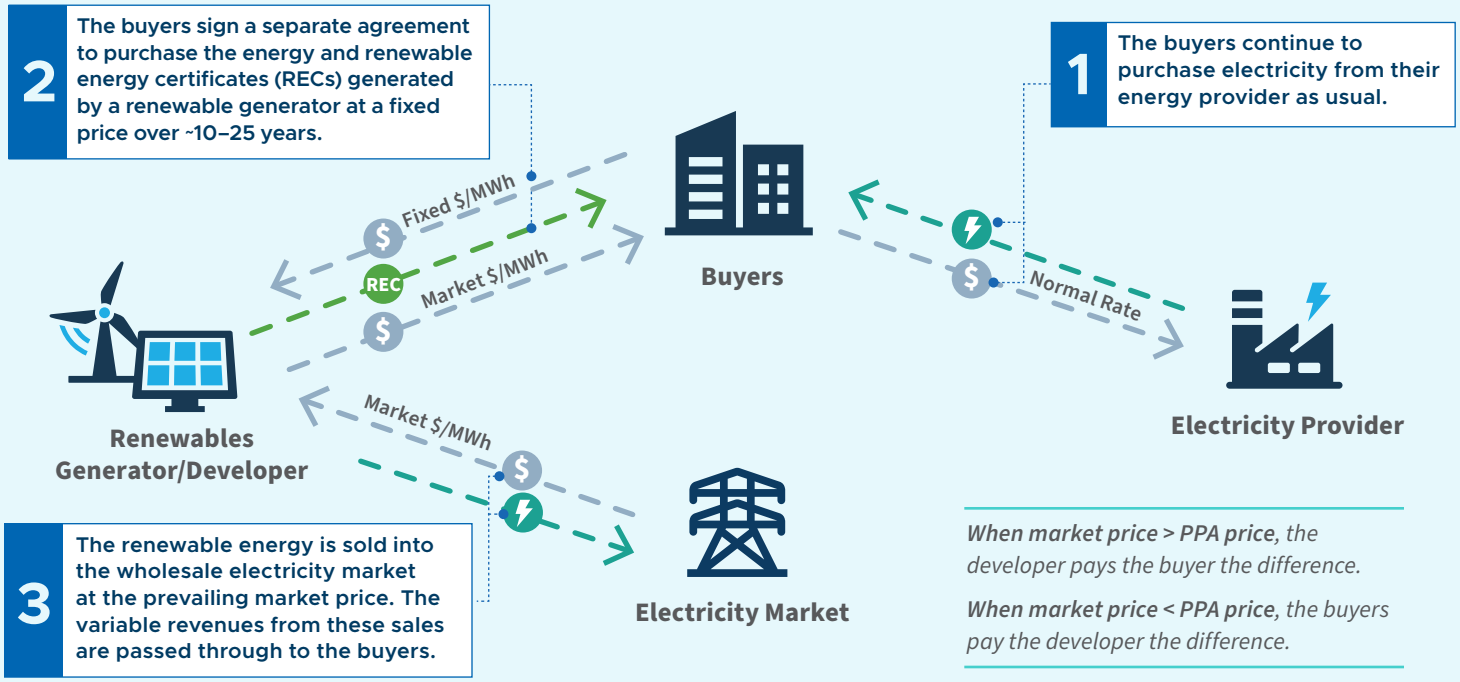
Managing power via a wholesale market subaccount: Subaccounts provide a mechanism through which buyers can access competitive market prices and actively manage their energy purchases via an established power marketer/retailer. This approach makes the most sense for local governments that already have a subaccount or those that have a large load and would be interested in purchasing electricity on the wholesale market.

Managing power as a FERC licensed power marketer: Instead of working with a retailer, buyers may be able to directly manage their own power as a power marketer. Becoming a power marketer requires completing a lengthy application process with the FERC. As such, this approach makes the most sense for local governments that are already managing power as a FERC licensed power marketer (e.g., cities with their own municipal utility).

For additional information on off-site physical PPAs, visit the American Cities Climate Challenge Renewables Accelerator's **Off-Site Physical PPA Procurement Guidance**.[6]

[iv] Due to the lengthy process involved in becoming a FERC licensed power marketer, this approach is not usually recommended if your organization does not already have these capabilities.

Exhibit 3 How an Aggregated Virtual Power Purchase Agreement Works



A **virtual PPA** is a financial arrangement between a renewable energy project developer and a group of buyers. Unlike a physical PPA, the buyer does not take ownership of or receive the produced energy, and there is no direct impact on a buyer's physical operations or utility bills. Instead, the electricity generated by the project is sold into a wholesale electricity market at the prevailing price (which can fluctuate significantly over time, depending on market conditions). If the wholesale market prices are greater than the predetermined $/MWh PPA price, the developer pays the positive difference to the buyers. If the wholesale market prices are lower than the PPA price, the buyers pay the difference to the developer. The buyers also, typically, receive the associated RECs.

Like physical PPAs, virtual PPAs can provide critical revenue certainty to developers looking to finance and construct new renewable energy projects. This makes virtual PPAs attractive for buyers who are interested in supporting new, or "additional," renewable energy development.

One benefit of virtual PPAs is that the buyers can be located anywhere in the United States—they do not need to be located near each other or be in a retail choice state. The only requirement is that the renewable energy project be in or have access to a wholesale market. However, signing virtual PPAs with projects that are geographically close to the buyers can provide additional benefits such as local job creation and enhanced hedge value. For more information on this topic, see the American Cities Climate Challenge Renewables Accelerator's **Virtual PPA Procurement Guidance**.

Local governments can also pursue a special utility contract for a virtual PPA in which a utility plays a role in developing or contracting for the renewable energy project and the financial settlements are incorporated into a local government's utility bills.

Successful Aggregation Projects

This guide draws heavily from lessons learned in successful aggregation projects. While these case studies highlight the variation in aggregation deals, they have two key themes in common:

1. Partners often emphasized the importance of compromise.
2. Participants were able to access benefits of large-scale renewable energy that would have been unattainable if they had been acting alone.

Melbourne Renewable Energy Project

Led by the City of Melbourne in Australia, a group of fourteen cities, public institutions, and banks procured a mix of energy and RECs from a nearby wind farm. This group provided participants with a significant range of procurement options, which provided additional flexibility but significantly complicated the process. The group collectively acted as an anchor offtaker for the wind farm.[7]

- **Partners:** City of Melbourne, City of Moreland, City of Port Phillip, City of Yarra, Australia Post, Bank Australia, RMIT University, Citywide, Melbourne Convention Exhibition Center, National Australia Bank, Next DC, University of Melbourne, Zoos Victoria, and Fed Square.
- **Deal:** Physical PPA or REC-only purchases for 88 GWh from an 80 MW wind farm over 10 years.
- **Resource location:** Western Victoria, Australia.
- **Offtake arrangement:** Partners procured different amounts, with each city procuring enough to meet 100% of its load.
- **Group structure:** Out of fourteen total partners, a sub-group of six buyers made most of the decisions on behalf of the group.
- **What makes this deal unique?** The deal supported co-benefits, including creating more than 140 jobs during construction and establishing a sustainability fund to share profits with local community groups. Melbourne is using its expertise from this deal to facilitate a second aggregated PPA deal for businesses and institutions across the city.[8]

Read the full case study here.

Boston, MA, Summit Farms PPA

A university, medical center, and development corporation partnered to purchase 60 MW of solar. They sold the electricity on the wholesale market and kept the RECs.[9]

- **Partners:** Massachusetts Institute of Technology (MIT), the Boston Medical Center (BMC), and the Post Office Square Redevelopment Corporation (POS).
- **Deal:** Virtual PPA for 60 MW of solar energy.[v]
- **Resource location:** North Carolina, PJM.
- **Offtake arrangement:** MIT purchased 73% of the facility's output, BMC purchased 26%, and POS purchased the remaining 1%.[10]
- **Group structure:** Post Office Square, despite being the smallest buyer, was the first to commit to the project and provided critical momentum for the project. The group's efforts were then facilitated by A Better City.
- **What makes this deal unique:** MIT justified locating the solar plant in North Carolina rather than in Massachusetts, because it would reduce more greenhouse gases due to the PJM region's greater reliance on coal and other fossil fuel generation.

Read the full case study here.

[v] One source suggests that the participants took legal title to the electricity. If this is true, some might argue that the transaction should be considered a physical PPA from a legal perspective. However, as the electricity was sold into the market rather than delivered to the customers, it is effectively a virtual PPA as defined in this report; so, for simplicity this is how it is represented here.

Corporate Renewable Energy Aggregation Group

Five corporations procured 42.5 MW of solar with a virtual PPA. The group collectively acted as an anchor offtaker for the project.[11]

- **Partners:** Bloomberg, Cox Enterprises, Gap Inc., Salesforce, and Workday.
- **Deal:** Virtual PPA for 42.5 MW of a 100 MW solar project.
- **Resource location:** North Carolina, PJM.
- **Offtake arrangement:** Each partner signed a contract for 5–10 MW.
- **Group structure:** Buyers accepted identical pricing and a uniform contract, shared all transaction expenses equally, and used a blended, collective-credit rating.
- **What makes this deal unique:** The virtual PPA was enacted using LevelTen's Dynamic Matching Engine. The group used a template virtual PPA contract and the same legal counsel.

Read the full case study here.

Dutch Wind Consortium

The Dutch Wind Consortium, consisting of four corporations experienced with renewable procurement, executed two physical PPAs for wind power.[12]

- **Partners:** AkzoNobel, DSM, Google, and Philips.
- **Deal:** Two physical PPAs for 102 MW and 34 MW of wind energy.
- **Resource location:** The Netherlands.
- **Offtake arrangement:** Each partner purchased 25% of the renewable projects' output.
- **Group structure:** The group assigned different consortium partners to lead on different aspects of the PPA: AkzoNobel led communications, DSM and Google managed the legal issues, and Philips handled the accounting.
- **What makes this deal unique:** The four companies structured their partnership as a consortium with the intention of pursuing multiple transactions.

Read the full case study here.

Amazon-Arlington Solar Farm Virginia

Arlington County and Amazon partnered on a virtual PPA for 120 MW of solar, structured through their utility, Dominion Energy.[13]

- **Partners:** Arlington County, Virginia, and Amazon.
- **Deal:** Virtual PPA for 120 MW of solar; structured through the local utility, Dominion Energy.
- **Resource location:** Pittsylvania County, Virginia, PJM.
- **Offtake arrangement:** Arlington County procured 31.7% of the facility's output, equivalent to 83% of the total electricity used by County government each year. Amazon procured the remaining 68.3% of the output.
- **Group structure:** This followed the supplier-led aggregation model as Arlington County and Amazon did not procure together and did not coordinate on deal terms. The deal was initiated by Dominion and Amazon after Amazon announced it would build its second Headquarters in Arlington.
- **What makes this deal unique:** This was the first virtual PPA completed by a local government.

Read the full case study here.

Buyer-Led Aggregation

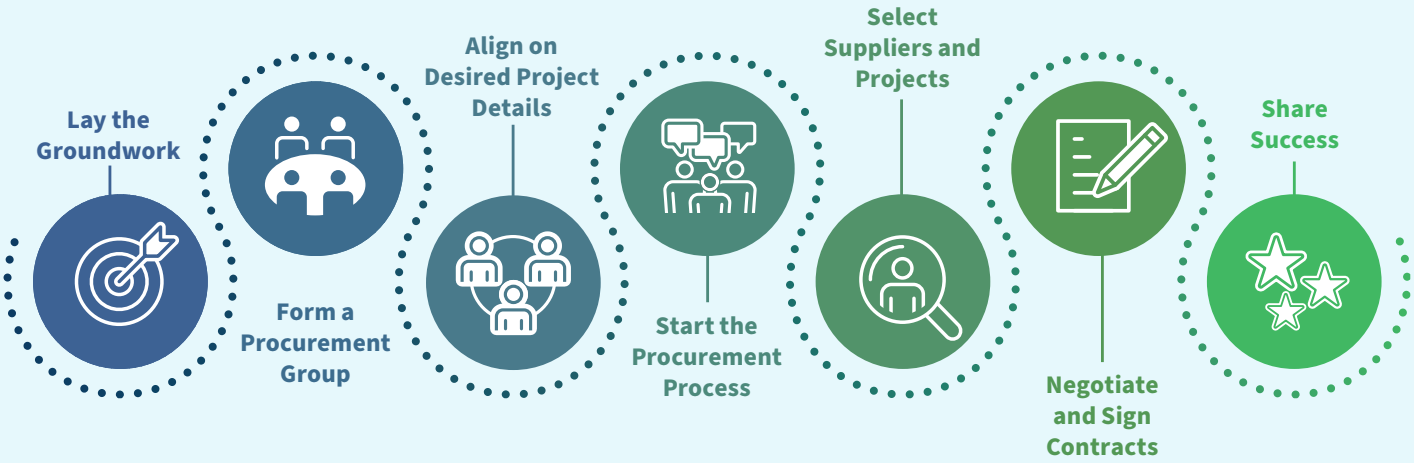
This section includes a step-by-step guide to help local governments through the buyer-led aggregation process—from forming a buyer group to signing contracts and sharing success stories. There are seven steps:

1. Lay the groundwork in each participating organization
2. Form a procurement group
3. Align on desired project details
4. Start the procurement process
5. Select suppliers
6. Negotiate contract terms, get final approval, and sign separate contracts
7. Share success

To further assist local governments, this guide includes tools and resources to help individual buyers and groups. This guide should be viewed as a general pathway based on past successful aggregation groups that local governments can then customize to best serve their group.

The Buyer-Led Aggregation Process

Exhibit 4 **The Buyer-Led Aggregation Process**



Step 1: Lay the Groundwork in Each Participating Organization

Before proceeding with an aggregated procurement, each buyer should do the following:

1. Identify renewable procurement needs
2. Review procurement options with legal and accounting
3. Prepare a pitch and secure initial buy-in from key staff and decision makers

1.1 Identify Renewable Procurement Needs

Each local government should identify its own renewable procurement needs before aligning with partners. Local governments should be specific where necessary but indicate their flexibility where possible. This will help maximize the number of potential partners while also being upfront about critical priorities. Local governments should assess the following key information at this stage:

- The amount of energy in MWh the local government would like to procure
- The favored procurement methods
- When the resource should come online
- Where the resource should be located
- The level of engagement a local government wants to have with the process and the time commitment staff can make to support the deal

A basic version of a **Large-Scale Renewables Aggregation Alignment Tool** is included as an appendix to this document to demonstrate what details need alignment at what stage. A more complete Large-Scale Renewables Aggregation Alignment Tool is available on the Renewables Accelerator website.

Large-Scale Renewables Aggregation Alignment Tool

What is it? A Google spreadsheet that allows multiple buyers to fill out preferences, so they can identify where they are aligned on deal terms and where they need to negotiate before moving forward.

When to use it? This should be used at the beginning of partnership conversations and again before issuing the RFP to ensure partnership makes sense and every partner is comfortable with the details going into the RFP.

Where can I find it? **The tool is available** on the American Cities Climate Challenge Renewables Accelerator website.

1.2 Review Procurement Options with Legal and Accounting

Physical PPAs and virtual PPAs have different legal and accounting considerations. It is important for deal champions within local governments to consult with their legal and accounting teams—and possibly the procurement department as well—early in the process to identify any relevant requirements or constraints. Aggregation partners may be able to simplify these conversations by pooling their legal and accounting knowledge and identifying common issues and solutions.

Deal teams should not feel that they need to have all the answers at this stage, but there are several common issues that they should be prepared to address during these internal conversations.

Accounting Considerations:[vi]

If pursuing an aggregated deal, it is best to come to alignment early on about accounting considerations and associated contract language, as these will impact how the transaction is accounted for under various accounting frameworks. Local governments, companies, and other organizations typically prefer to structure PPAs to use accrual accounting as opposed to other potential frameworks (e.g., lease or derivative accounting), as this approach is the simplest and will not impact an organization's balance sheet.

[vi] The analysis provided here is based upon RMI staff consultation with existing resources and accounting experts. It is designed to provide a starting point for understanding accounting related to off-site PPAs but should not be considered official accounting advice. Local governments, public institutions, and corporations should work with their accountants to come to their own conclusions regarding what type of accounting treatment is appropriate and to ensure they are comfortable with entering into these types of contracts.

Fortunately, for both physical and virtual PPAs, local governments and public institutions are exempt from many of the complicated accounting requirements that apply to corporations, including variable interest entity, lease, and derivative accounting. This makes it easy for aggregation groups consisting solely of government and public entities to use accrual accounting. The reasons these types of accounting requirements don't apply are as follows:

- **Variable interest entity (VIE) consolidation accounting:** Government entities are exempt from VIE accounting.
- **Lease accounting:** Lease accounting is not triggered by government electricity purchases.
- **Derivative accounting:** A normal purchases and normal sales exception applies to PPAs.

However, aggregation groups that include corporations may need to structure their agreements carefully to avoid triggering VIE, lease, and derivative accounting under the Financial Accounting Standards Board. Corporations will typically want to do the following:

- **Avoid VIE consolidation accounting** by purchasing less than 50% of a project's output or by ensuring that they do not have the right to control the facility.
- **Avoid lease accounting** by ensuring that they purchase only a portion (i.e., less than 90%) of the total output from the facility.
- **Avoid derivative accounting** by purchasing a percentage, rather than a fixed amount, of output. This is often accomplished by buyers agreeing to purchase the energy generated by a specific number of megawatts in lieu of contracting for a predetermined number of megawatt-hours per year.

Even if a group does not initially include corporations, it should still be mindful of these corporate accounting barriers if participants are open to inviting corporations to join later.

Legal Considerations:

Whether cities can enter into physical PPAs or virtual PPAs, along with how those contracts can be structured, will be determined by state and local regulations. Local governments should start the legal process by evaluating these local regulations, determining what other cities in their state have done in the past, and determining if there are barriers to working with certain kinds of partners.[14]

Physical PPAs: As discussed earlier in the section *How It Works (Procurement Options)*, the legal ability for a local government to enter into a physical PPA will largely depend on state law. In states that have not enacted retail choice, electric utility companies retain legal monopolies on the sale of electricity from the grid.[vi] As a result, local governments in these states are unable to sign physical PPAs with developers directly; instead, they can only do so in partnership with their local utility. The only exceptions to this rule are cities that operate their own municipal utilities or CCAs. Meanwhile, local governments in states that have enacted retail choice can usually legally sign physical PPAs, either directly or via a retail electricity provider.

Virtual PPAs: The legality of virtual PPAs for local governments is more nuanced and can be impacted by both state and local regulations.

Steps to Evaluate Legal Issues: A preliminary legal review can help a local government determine which strategies to pursue and can inform specific considerations that may need to be aligned with partners. At this stage, there are several important topics to review:

- Any state or local prohibitions to entering into either type of PPA
- Requirements for entering into long-term contracts and competitive bidding
- The need for an authorizing ordinance or resolution
- Any legal barriers to working with corporations or public institutions

[vii] These monopolies may or may not extend to generation located on customer property (i.e., on-site solar).

Local governments may need to pass authorizing legislation to enter into a renewable procurement. During this step, identify if each procurement option you are considering needs a formal council or board vote to authorize it, and if so, when in the process that needs to occur. Additionally, if pursuing a virtual PPA, a local government may choose to pass an ordinance authorizing the local government to enter into the virtual PPA and then pass a resolution for the specific contract. More information on what needs to be included in authorizing legislation for a virtual PPA is included in the **Virtual Power Purchase Agreement Legal Considerations** primer on the Renewables Accelerator website.[15]

1.3 Prepare a Pitch and Get Initial Buy-in from Key Staff and Decision Makers [Pitch #1]

Before joining a procurement group, individual buyers should prepare and deliver a pitch on aggregated renewable procurement to key decision makers within their organization. The primary goal of the initial pitch is to secure permission to move forward with a procurement group. As this decision can be impacted by multiple departments, it can be helpful to meet individually with representatives from legal, accounting, or operations to ensure alignment and then include them in the pitch session. Local governments may also choose to invite representatives from partner organizations to provide their expertise, credibility, or insights to the discussion.

A secondary goal of this pitch should be to educate decision makers and start to prepare them to approve the ultimate transaction that the group develops. This is especially true for local governments pursuing virtual PPAs, which will be unfamiliar to most local government staff.

The initial pitch should explain the following:

- The need for a large-scale renewable procurement to meet climate and energy goals
- The benefits of aggregation, supported by case studies of successful examples
- The potential aggregation partners
- The types of contracts under consideration and the action needed from the local government (e.g., an ordinance or resolution), if any

It can be helpful to prepare a short presentation and memo to share in addition to having one-on-one conversations. The American Cities Climate Challenge Renewables Accelerator's **Large-Scale Renewables Aggregation Pitch Deck Template**, available on the Renewables Accelerator website, is one tool that can help local governments pitch an aggregated PPA.

Large-Scale Renewables Aggregation Pitch Deck Template

What is it? A customizable slide deck designed to help local governments pitch aggregated renewable procurement to decision makers. The template slides provide a suggested series of key points that help educate decision makers about aggregated procurement efforts and the potential benefits they can provide. The accompanying Pitch Deck Checklist for Local Governments includes additional best practices for successful project pitches.[16]

When to use it? The template slides can be customized to support pitches at different stages of the procurement:

1. An initial pitch is geared at getting support for joining a procurement group. There is also a **handout template** available for this stage.
2. A second, more detailed, pitch helps ensure buy-in before the procurement group issues an RFP.
3. A final pitch is used for formal approval to enter into the contract.

Where can I find it? **The template is available** on the American Cities Climate Challenge Renewables Accelerator website.

Step 2: Form a Procurement Group

The next step is to form a procurement group. To do so, individual buyers or groups should take the following steps:

1. Identify partners
2. Align with potential partners
3. Establish a governance structure

2.1 Identify Partners

Aggregated deals will be most successful if all partners are highly motivated to complete a transaction and have similar priorities and goals. One way to screen for motivated partners is to find organizations that have passed formal climate or renewable energy goals or that have joined organizations such as Renewable Energy Buyers Alliance, RE100, the Science Based Targets Initiative, America Is All In, Climate Mayors, and USDN. Ideally, potential partners will have already been considering a renewable procurement on their own. Moreover, participants should ensure that potential partners are aligned regarding the type of procurement, timeline, and risk tolerance along with other specific project needs.

Groups should be small enough to be effective, but large enough to continue with the procurement if one or two partners drop out.[17] Case studies of aggregated renewables procurement suggest that creating a relatively small, core group of three to six partners can help ensure trust and group cohesion; additional partners can opt in later once the RFP terms have been determined. For example, the Melbourne Renewable Energy Project included fourteen total buyers, but only six were involved in key decision-making on behalf of the procurement group. That said, procurement groups should be large enough to achieve the economies of scale necessary to unlock the benefits of aggregation; past aggregated transaction sizes have ranged between 34 and 165 MW.

When selecting partners, it is important to consider the following:

- Working with other local governments, public institutions, and corporations with which you have an existing relationship, including any with whom you have already done a joint procurement in the past.
- Including a corporation or public institution that has experience with physical or virtual PPAs.
- Inviting companies that have a large presence in your local community or are a large contributor to your community's emissions.
- Advancing equity by partnering with women- and minority-owned businesses, historically Black colleges and universities, or other entities that primarily benefit underserved communities.

Before joining, each additional partner should follow the process outlined in Step 1 of this guide.

2.2 Align with Potential Partners

The are several things potential partners should align on:

- Ensure they have enough initial alignment to warrant forming a group.
- Share their initial assessment of procurement needs and confirm that there are not any critical points of misalignment.
- Consider if they have compatible priorities regarding the type of resource, location, timeline, and procurement method.
- Share with each other the amount of energy, or the range, they are looking to procure.

Regarding the last point, the exact amounts do not need to be finalized at this stage. However, it will be helpful for the group to understand the potential size of the procurement and gauge if additional partners should be invited in to achieve a minimum viable transaction size (e.g., 20 MW).

The *Alignment I* section of the Procurement Alignment Tool, included as an appendix to this report, can help potential partners ensure they have enough initial alignment to warrant further collaboration.

2.3 Establish a Governance Structure

It is important for procurement groups to develop a governance structure early on that establishes how key decisions are made and that allows deal negotiations to proceed. Buyer-led aggregated deals can take on many different forms, but they generally fall into three categories: the anchor offtaker model, the equal offtaker model, and the tiered model.

Exhibit 5 **Procurement Group Models**

- **Anchor Offtaker Model:** One buyer decides to pursue a large-scale renewable procurement and invites others to join. The anchor buyer plays a critical role in creating momentum for the deal and moving the project forward. The anchor buyer often purchases a larger portion of output and makes key decisions about the project on behalf of the group, although smaller buyers can also serve as an anchor by convening and facilitating a group.
- **Equal Offtaker Model:** Multiple buyers make key decisions jointly and tend to split the project's output more evenly.
- **Tiered Model:** A core group of partners take primary responsibility for managing the procurement and decision-making of a broader group. This approach of centralizing decision-making authority can be particularly useful to help larger groups continue to make steady progress. However, when new parties are invited to join, the core group of decision makers should clearly communicate this structure and explain which terms have been decided and which are negotiable.

When setting up a procurement group, participants should do the following things collectively:

- Establish who will facilitate or project manage the ongoing procurement. This can be a single buyer, a sub-group of buyers, or a third-party consultant.
- Establish a meeting schedule and communication norms. Procurement groups will likely have weekly or biweekly conference calls, which will be most effective if they have a clear agenda and effective facilitation.
- Determine who makes what decisions, when and how they are made, and how decisions are communicated to the group.
- Identify deadlines for all partners to obtain official sign-off from senior decision makers for the deal.
- Clarify who will issue the RFP, review responses, and ultimately decide on a project.
- Establish whether outside experts or consultants will be required to help with the procurement, how they will be selected, and how any potential costs will be shared.
- Decide whether other buyers can be invited to "piggyback" and join the procurement after the RFP is issued.
- Determine how this group will handle the announcement of a deal, including press coverage.

Cost Structure Considerations for Selecting a Consultant

Consultants can often be paid through a success fee or hourly rates. Paying a consultant through a success fee reduces or eliminates the need to pay the consultant up front, which can be attractive to cash-strapped local governments. However, success fees can have two potential downsides. First, if a deal does go through, the local governments will almost certainly end up paying more in the long run, as the consultant will reasonably require a higher rate of return to compensate them for taking on the risk that a deal might not happen. Furthermore, success fees give the consultant a financial incentive to get a contract signed, which could impact their ability to provide neutral advice in some cases.

Manage the RFP Process

It is especially important for groups to decide how the RFP will be reviewed. Past procurement groups have had RFPs evaluated by a single buyer, a sub-group of buyers, all buyers, or a consultant. Having more people review the RFP responses will generate more alignment and acceptance of the results but will also increase the amount of time required.

Create Governance Documents

Members of a procurement group may choose to sign formal governance documents—such as a memorandum of understanding (MOU), participant agreement, or cost-sharing agreement—that codify the partnership and establish the group's governance structure. Initial governance documents can clarify who will play key roles, how the ongoing procurement will be managed, how the group will communicate with each other and the press, and how decisions will be made.

Creating formal governance documents at the initial stage of forming a group may require a small investment of time and capacity; however, doing so can provide valuable additional certainty to participants before they commit more resources. For example, deal champions may find it useful to present governance documents in early pitch sessions to senior leadership within their local governments. This may not only help secure buy-in from key decision makers for the deal overall, but also speed the process of authorizing these initial partnership agreements. If groups choose not to create formal governance documents they should, at a minimum, record any agreements made regarding governance structures and decision-making rights within meeting notes and share them with all partners.

There are several types of governance documents that a group might want to consider:

- **Cost-sharing agreement:** A document that details how costs will be shared across group members. Past aggregation groups have split costs evenly, apportioned costs based on buyers' total load or desired amount of renewable electricity, or a combination.
- **MOU or participant agreement to guide the RFP process:** A document that buyers sign before issuing an RFP that includes how the RFP will be managed and evaluated, the responsibilities of each buyer, non-disclosure and confidentiality terms, and any dispute resolution processes.
- **MOU or participant agreement once contracts are signed:** A document that includes the mechanics of contract administration and how buyers will work together throughout the duration of the PPA contract.

Step 3: Align on Desired Project Details

At this stage, partners should further discuss and align on certain key elements of the transaction and RFP:

1. Align on legal, accounting, and risk management considerations
2. Discuss and refine project details
3. Align on project evaluation criteria

Throughout this process, groups should try to remain flexible where possible in order to retain participants and attract the greatest number of project proposals from developers.

3.1 Align on Legal, Accounting, and Risk Management Considerations

The *Alignment II* section of the Procurement Alignment Tool in the Appendix is designed to help groups align on legal, accounting, and risk management issues. After each participant has filled this section out individually, the group should discuss any potential legal barriers, risk mitigation strategies they want to pursue together in the RFP, and the desired accounting methodology.

Groups should also align on whether to request specific risk mitigation strategies in the RFP. These include retailer-firmed generation, production guarantees, proxy generation, hub/node settlement, and price floors, ceilings, or collars. More information about these and other risk mitigation strategies are included in ***A Local Government's Guide to Off-Site Renewable PPA Risk Mitigation***.[18]

A Local Government's Guide to Off-Site Renewable PPA Risk Mitigation

What is it? An overview of strategies to help mitigate risk when pursuing a physical or virtual PPA, ranging from provisions to include in an RFP to supplemental contracts with third parties.

When to use it? This report can help local governments identify which risk mitigation strategies to pursue as part of, or in addition to, an off-site PPA. Individual buyers should review the primer before aligning as a group. Some of these strategies can be undertaken individually, while others will be most effective if all buyers choose to pursue them together.

Where can I find it? **The report is available** on the RMI website.

3.2 Discuss and Refine Project Details

At this state, procurement groups should align on project criteria to include in an RFP. Key decisions include the following:

- What is the desired type of procurement (i.e., physical PPA, virtual PPA, utility special contract)?
- What is the desired type of renewable resource (e.g., solar or wind)?
- Will procurement involve a single resource or a diversified portfolio of projects?
- What are the desired locations (e.g., a specific state, wholesale market, or region)?
- Will this be a newly developed resource that might not have been built, but for this contract (i.e., additionality)?
- How will participants handle the RECs (i.e., retire, bank, or sell them)?
- What are the acceptable contract lengths (i.e., 10, 15, 20 years)?
- When is the desired commencement of operations (COD) date for the resource (i.e., when do participants want to start receiving the energy and RECs)?
- What are the cost or net present value (NPV) requirements?
- Will the price be structured as a fixed price per MWh or an escalating price over time?
- Who will own and operate the resource (i.e., utility or third-party ownership)?
- What are the desired co-benefits? (See below for more information.)

As groups consider these questions, it will be important to strike the right balance of providing developers clarity where needed yet retaining flexibility where possible. If an issue is non-negotiable, groups should make that clear to ensure that developers provide conforming proposals. That said, maintaining flexibility and openness to creative approaches where possible will likely provide groups with more RFP responses and, potentially, better prices.

Procurement groups can also integrate goals beyond renewable procurement (i.e., co-benefits) into their RFPs. There are several potential co-benefits to consider:

- Job creation
- Renewable energy education and training
- Promotional opportunities
- Biodiversity protection (e.g., pollinator-friendly solar) or habitat restoration
- Consultation with and benefits for Indigenous Peoples
- Local economic benefits related to project development
- Social inclusion for marginalized groups
- Inclusion of women- and minority-owned businesses
- Support for union labor and livable wages

Groups should also discuss attributes they are looking for in the project developer or retailer, such as a strong reputation and references, financial stability, or sustainability credentials. Finally, if groups want to allow individual participants to customize specific elements of the template contract, it is important to decide in advance which clauses can be customized and clearly communicate this fact to potential proposers in the RFP.

3.3 Align on Project Evaluation Criteria

Once a group decides what to include in an RFP, the next step is to align on how to evaluate RFP responses. This discussion may encompass questions such as how much weight to give to various group requirements, whether to communicate criteria weights in the RFP, what issues might disqualify respondents, and which parties will make the ultimate selection. The process for making these decisions may differ depending on the group's governance structure:

- An **anchor buyer** might determine the evaluation process themselves or propose a process and solicit input from the other buyers.
- Groups using an **equal buyer model** or **tiered model** often take a more democratic approach, with all buyers or a subset of participants making these types of decisions by building consensus through discussion or casting votes to indicate their preferences.

Step 4: Start the Procurement Process

This is the critical moment for procurement groups to finalize the set of participating organizations. This entails two key steps:

1. Pitch to senior leaders (to be completed by deal champions in each organization)
2. Finalize RFP participation and buyer commitments

4.1 Pitch to Senior Leaders [Pitch #2]

The second pitch should present decision makers with an overview of potential outcomes alongside specific details included in the RFP. The following key items should be addressed when pitching an RFP to decision makers:

- Benefits to the local government with respect to its climate and energy goals
- Other anticipated co-benefits such as local jobs, tax revenue, health benefits, etc.
- The partners that are expected to participate in the RFP
- The RFP criteria and evaluation process, including review by any third-party technical experts
- The expected financial performance and the implications for the local government's future budgets
- An overview of key procurement statistics, including the size of the project being pursued, procurement method and resource types under consideration, and potential project locations

Depending on the procurement types being considered and your local government's needs, this pitch may accompany a formal authorization for the local government to issue or otherwise be included in the aggregated RFP or the signing of group governance documents.

4.2 Finalize RFP Participation and Buyer Commitments

Prior to releasing the RFP, procurement groups should finalize which organizations are participating in the RFP, if more organizations will be able to join after the RFP's release, and how obligated buyers will be to follow through on their individual purchases if a project is selected by the group.

As group participants make their respective pitches to senior leaders, the group should establish which organizations are moving forward and finalize each participant's desired amount of energy. The group may also choose to invite additional buyers to join the effort if they agree to the established RFP terms. Procurement groups that make significant changes to their membership may want to update or sign a new governance document prior to issuing an RFP that outlines who is involved, how the RFP will be managed, and who will select the supplier.

Groups should also decide whether other buyers will be invited to join or "piggyback" on the deal after the RFP is issued. Under a traditional approach, participation in the eventual transaction is restricted to partners that participate in the RFP, with each organization specifying its desired amount of electricity. With a piggybacking model, buyers not involved in the RFP can join the project later and get the same supply terms as those listed on the RFP. A related question is whether individual buyers will be obligated to move forward with their purchase if the group ultimately selects a project.

While piggybacking and minimal commitments can provide attractive flexibility, such approaches can also have significant downsides. In particular, the more flexible participants are with their specifications, the less able developers will be to make firm, competitive offers or even provide a response at all. As such, procurement group partners should consult with potential respondents to find the right balance for their context and needs and, potentially, come up with creative solutions. For example, the Melbourne Renewable Energy partners maintained the flexibility to drop out of the deal after the RFP was released. However, their governance documents stipulated that signatories had to have preapproval to sign a contract if responses met predetermined contract terms, such as PPA price and location.

Step 5: Run the RFP

Once partners have fully aligned on key terms and individually received approval from internal decision makers, they are ready to develop an RFP and select a proposal. To simplify this process, the Renewables Accelerator has developed an **RFP template** that groups can tailor to their particular situation.

Aggregation groups should make sure to include the following information in their RFP:

- The group's combined annual desired amount of renewable capacity or energy (in MW or MWh) as well as that of each individual buyer, along with the number of accounts. (For physical PPA transactions, it is ideal to also provide hourly, or 8760, load profiles for each buyer. Groups with some flexibility may also choose to present a range of acceptable transaction sizes to encourage a greater range of responses and test if different size contracts provide different price points.)
- A clear indication that the selected respondent would be expected to sign a similar, yet separate, contract with each buyer.
- A description of what each buyer can customize after the template contract is developed.
- A description of the RFP evaluation process and a list of the evaluation committee members, which may include a consultant and some, or all, of the participating buyers.

Aggregated Off-Site Renewables Power Purchase Agreement—Request for Proposal (RFP) Template

What is it? An easily modifiable template, including a suggested structure and example language, to use when developing an aggregated renewable RFP. The accompanying bid sheet is meant to be released in conjunction with the RFP to help aggregation groups collect project and economic data across all responses in an easily comparable fashion.

When to use it? This tool can be used as a starting point to create a joint RFP. While many local governments may already have their own RFP templates, this can help show the additional sections that should be included for an aggregated RFP.

Where can I find it? **The template is available** on the American Cities Climate Challenge Renewables Accelerator website.

Groups will likely need external technical assistance to help review project proposals, but the **Solar and Wind Off-Site PPA Economic Calculator (SWOPEC)** tool can provide a useful, initial financial assessment of different proposals.[19]

Solar and Wind Off-Site PPA Economic Calculator (SWOPEC)

What is it? An Excel model that provides a life-cycle financial analysis of off-site renewable energy physical and virtual PPAs.

What does it do?

1. It evaluates the economic implications of off-site versus other renewable procurement methods early in the procurement process.
2. It can compare different off-site PPA RFP bids later in the procurement process.

How to use it? Download the Excel model from the Renewables Accelerator website and follow the embedded instructions. A full video tutorial is also available on the tool's landing page.[20]

Where can I find it? **The tool is available** on the American Cities Climate Challenge Renewables Accelerator website.

Technology-Aided Procurement

While procurement groups typically have issued RFPs to find potential suppliers, an alternative, technology-aided approach has recently emerged that can streamline the process. This new approach utilizes platforms containing databases of renewable energy projects being considered for development and, using a dynamic matching engine, matches buyers with projects that meet their criteria. Two such platforms are the LevelTen Marketplace in the United States and DNV GL's Instatrust in Europe.[21] Buyer-led procurement groups can use these matching platforms if doing so does not violate the procurement requirements for any participant.

As an example, the Corporate Renewable Energy Aggregation Group issued an RFP and selected LevelTen to support a virtual PPA in 2019.[22] Three months after engaging LevelTen, the group issued an RFP through LevelTen's transaction marketplace and received roughly 100 responses. Although the group was unable to secure the first project selected, they subsequently launched a second RFP through LevelTen and, one month later, selected a solar project.

Step 6: Negotiate Contract Terms, Get Final Approval, and Sign Separate Contracts

Once a desired supplier is selected, the group is ready to take the final steps to finalize their contracts:

1. Negotiate contract terms
2. Get final approval
3. Sign separate contracts

6.1 Negotiate Contract Terms

With buyer-led aggregation, negotiating contract terms generally falls into three stages. First, the project developer and buyers will negotiate and sign a term sheet before entering into an exclusivity agreement to negotiate the full contract. Aggregation groups should be mindful to work efficiently with developers toward a term sheet and exclusivity agreement to prevent other, nimbler buyers from poaching the project.

Second, a template contract will be developed that will form the basis for each buyer's individual agreement with the developer. This template contract may be largely developed by an anchor buyer or through the group's previously determined processes and procedures.

Third, each buyer will review the contract and, in some cases, make a few additional modifications. Generally, contract negotiations can take months and go through many revisions.

If the group has not already done so, it can be helpful during this process to designate certain individuals to liaise with the project developer on behalf of the procurement group. For example, the Dutch Wind Consortium appointed a single point of contact for operational questions to ensure effective communication with the wind farm owner.[23] Meanwhile, the Corporate Renewable Energy Aggregation Group chose to hire shared legal counsel to negotiate with the developer on behalf of the group and liaise with internal legal teams.[24]

Groups may find it necessary or useful to allow buyers to amend certain portions of the template contract, but these adjustments should be used sparingly. One of the principal selling points of aggregation to a developer is that it reduces transaction costs by eliminating the need to negotiate separate contracts with each buyer. These lower transaction costs can translate into lower PPA prices for the buyers. As such, when issuing an RFP, aggregation groups should be transparent about which contract terms can be negotiated by individual buyers and should limit these areas of flexibility as much as possible.

Managing Risk During Contract Negotiations

As discussed in section 3.1, there are several key project risks and risk mitigation strategies that groups should keep in mind during these final negotiations. Review RMI's report ***A Local Government's Guide to Off-Site Renewable PPA Risk Mitigation*** to ensure that buyers understand the potential risk and incorporate the desired risk mitigation strategies into the contract.

Joint and Several Liability

For an aggregated PPA, some groups may want to ensure there is no joint and several liability. Joint and several liability in a PPA is when a project owner can hold PPA counterparties liable for the offtake of one of the other buyers should any one buyer default or exit from the deal. The Dutch Wind Consortium decided not to accept joint and several liability and instead negotiated a solution that allows the project developer to find an alternative buyer and continue to sell its energy without interruption.[25] This protects both the project developer and the other buyers in the group if a single buyer defaults or exits a deal.

6.2 Get Final Approval [Pitch #3]

While governments, public institutions, and private businesses tend to have different decision-making structures, most if not all will need to secure final approval from senior leadership. Some local governments may require a resolution or council authorization before entering into the contract.

At this stage, senior leaders and decision makers should already be familiar with the proposed aggregated deal. The final pitch should focus on the specifics of the selected project and the benefits it will bring to the local government, including the following:

- A high-level overview of the deal, including how it will benefit the local government and help achieve its climate and energy goals.
- The specific details of the final project including the partners involved, the group's offtake structure, and basic information about the renewable project. This should include resource type and size and amount of energy or RECs the local government expects to receive annually.
- The estimated financial impact of the project on the local government's expenses, both for the first year and over the contract's lifetime.
- A summary of any local co-benefits associated with the project (e.g., job creation, enhanced tax revenue, health benefits).

6.3 Sign Separate Contracts

Finally, each party to an aggregated PPA should sign its own separate contract with the project owner.

Groups may choose to update their governance structures with a new governance document at this stage that clarifies how buyers will work together throughout the duration of the PPA contract.

Step 7: Share Success

Procurement partners should work with each other and the project owner to determine how and when to announce the deal to the press and general public. In particular, procurement groups should decide if communications staff across organizations will work collaboratively on the announcement or if one or a subgroup of buyers will take the lead.

Sharing success can help inspire other buyers (e.g., other local governments, public institutions, businesses, and universities) to pursue aggregated renewable energy purchases, potentially supporting local governments' communitywide renewable energy goals. For example, after successfully completing its first aggregated deal, the City of Melbourne chose to share the success of its deal and dedicate time and resources to catalyze other aggregated procurements of large-scale renewables in Australia. City officials wrote a case study about aggregated PPAs and published their RFP online to serve as an example to others.[26]

The City of Melbourne then convened a second aggregated procurement group of seven large energy users within the city. This second procurement helped supply 14 shopping centers, nine office buildings, seven educational campuses, and four manufacturing facilities across greater Melbourne with renewable energy. Together, the two deals will reduce the Melbourne community's greenhouse gas emissions by 5%.[27] This case study highlights how local governments can build on a successful aggregated deal to help their community members transition to renewable energy.

For more information on how to share your story, visit **cityrenewables.org**.[28]

Conclusion

Keeping climate change's impacts within 1.5°C is an achievable but challenging goal that communities across the United States will need to actively support for the country to successfully decarbonize at the necessary pace and scale. Aggregation provides a valuable mechanism to local governments that can not only provide enhanced benefits to communities but also serve to quickly scale collective action.

Moreover, aggregation groups can lay an important foundation for other collective actions. Aggregation groups in Australia and the Netherlands have demonstrated the potential for the same groups to pursue multiple renewable energy contracts together. However, local governments have plenty of other means to collectively drive impactful change. Climate Mayor cities successfully coordinated a bulk purchase of EVs to support transitioning their municipal fleets to electric.[29] We could also envision local governments driving market innovation by demonstrating a large-scale demand for greener products, such as low-carbon steel and cement.

The relationships, governance structures, and expertise developed through aggregated renewables transactions could thus serve as a key enabler to drive further action faster throughout US communities. To meet the challenge of climate change, we need to be innovative and push ourselves and others to do more faster.

Appendix

Large-Scale Renewable Aggregation Alignment Tool (Basic Version)

This table is meant to guide procurement group alignment. For each program component, group members should identify what they need, what they want, and what is negotiable. Under ***Need***, each organization should list any hard boundaries that would prevent their participation in the procurement. Each buyer should have no more than three needs total. Under ***Want***, group members should list elements of their ideal renewable procurement, and under ***Negotiable***, they should list other options they would potentially consider.

Alignment I: When forming a procurement group in Step 1, align on these considerations with potential partners.

Program Component	Need	Want	Negotiable
Timing of the deal (when do you want to issue an RFP, sign a contract, or start receiving electricity and/or RECs)			
Amount of electricity needed (MWh)			
Resource location (where do you want the project to be located)			
Procurement types (your preference for a physical or virtual PPA)			

Alignment II: For each procurement type being considered, align on accounting and legal considerations and any risk mitigation strategies the group wants to pursue. This section may require additional conversations with your legal and accounting teams.

Program Component	Need	Want	Negotiable
Preferred method of accounting (e.g., accrual accounting)			
Legal contract requirements the group needs to be aware of (e.g., requirement for competitive bidding, restrictions around contract duration)			
Risk mitigation strategies you want to pursue as a group			

Alignment III: Align on desired project details before issuing an RFP. At this stage, each group should finalize what they are looking for and share the relative importance of each program component to inform the RFP response evaluation criteria. Under ***Importance***, indicate the relative weight to assign to each program component, with the sum of these weights adding up to 100%. Write "Required" by the essential program components.

Program Component	Need	Want	Negotiable	Importance
Procurement type (physical PPA, virtual PPA, open to other developer-customized proposals)				
Desired renewable resource type (wind, solar, etc.)				
Single resource or diversified portfolio of projects				
Resource location (e.g., a specific state, wholesale market, or region)				
Additionality (i.e., whether this needs to be a newly developed resource that will not be built, but for this contract)				
Amount of electricity seeking to purchase annually (MWh)				
Contract length or range (years)				
Resource commencement of operations (COD) date				
Cost or net present value (NPV) requirements				
Fixed price per MWh or an escalating price over time				
Settlement location (i.e., hub, node, local load zone) *Note: this can be especially impactful for a virtual PPA*				
Resource ownership (utility owned, third-party owned)				
Desired co-benefits (e.g., job creation, renewable energy education and training, promotional opportunities, biodiversity protection, consultation with and benefits for Indigenous Peoples, local economic benefits related to project development, social inclusion for otherwise marginalized groups, inclusion of women- and minority-owned businesses, support for union labor and livable wages)				

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