



# What to Know About Corporate Procurement

September 2022

# LevelTen: renewable transaction infrastructure



LevelTen is the world's largest marketplace for buying and selling renewable energy and assets — powered by our world-class network, expertise, and data.

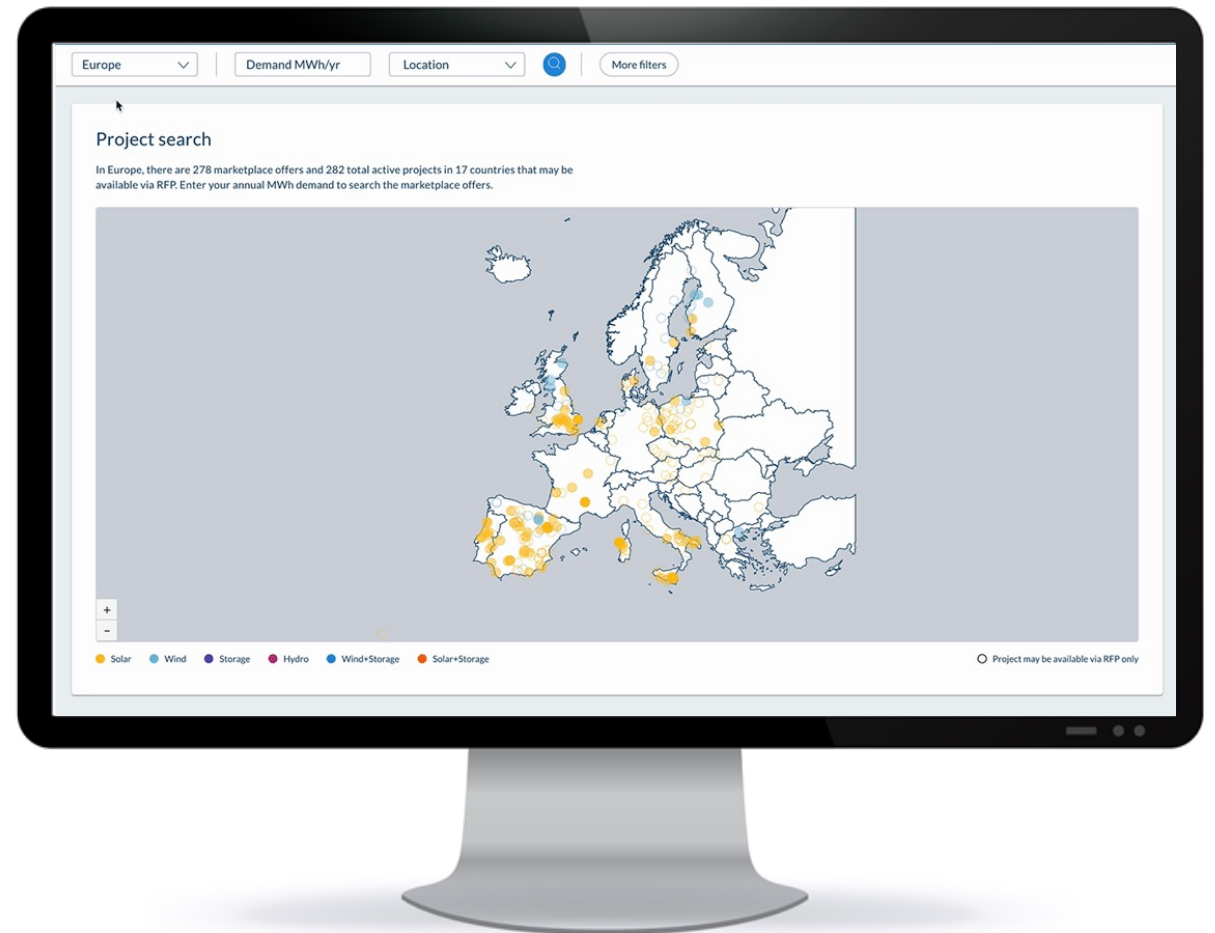
## Energy Marketplace

Instantly reach the world's largest renewable energy buyer network, including 25+ energy advisor partners who source PPAs for their clients.

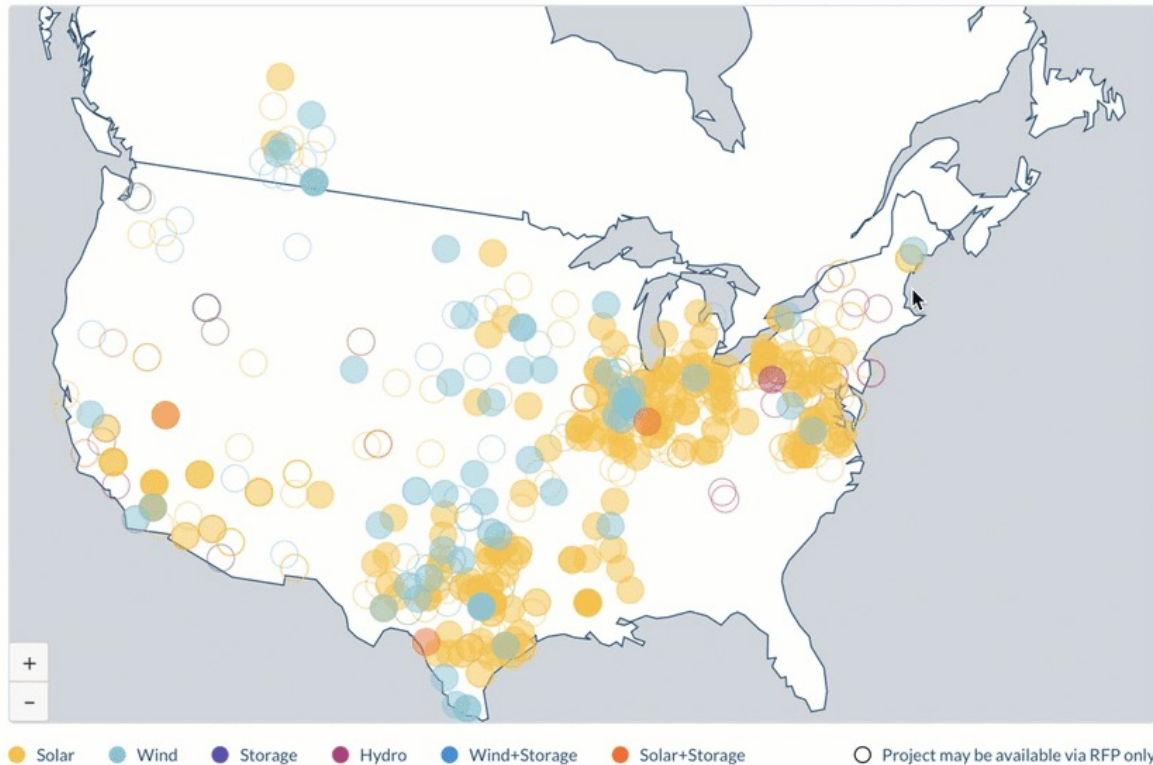
## Asset Marketplace

Sell your project or build your acquisition pipeline.

# The LevelTen Platform



# Fresh projects from 700+ developers



- **4,300+ PPA Offers**
  - 3,000+ in North America
  - 1,300+ in Europe
- **1,800+ Active Projects**
  - 1200+ in North America
  - 600+ in Europe
- **190 GW of Capacity**
- **21 countries covered (19 in EU)**
- **580+ global developers**
- **Facilitated >3.3 gigawatts of PPAs**



# What to Know

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## **1. Know what you're trying to accomplish**

Different goals require different strategies

## **2. Make sure your team understands timing and runway required**

Set realistic expectations



# Why PPA?

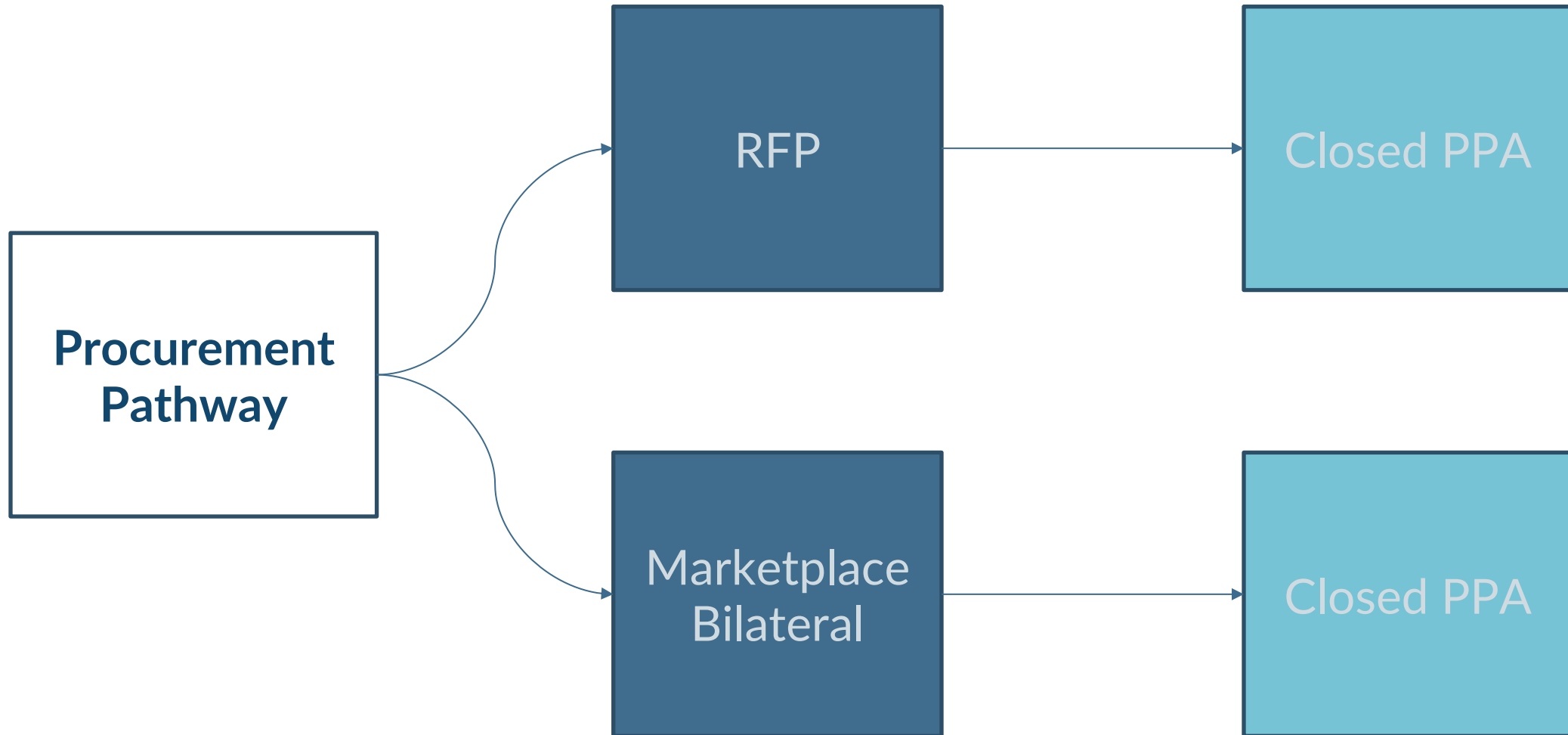
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- ✓ **Guarantees project long-term revenue**
- ✓ **Investors require long-term, guaranteed revenue**
- ✓ **Enables project financing and construction**
- ✓ **Leads to more renewables getting built**
- ✓ **Allows corporation to make sustainability claims**



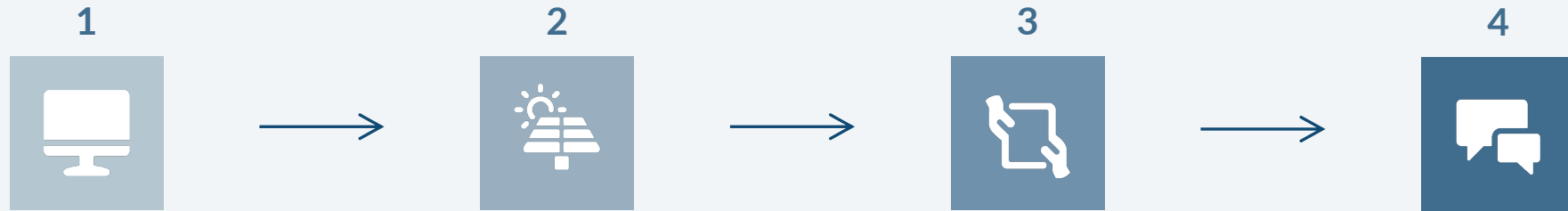
# Two Pathways to Securing A PPA

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# RFP Pathway: How It Works

## HOW PPA RFPs WORK



### Launch

Receive an email notification when a new RFP launches and view specifications in the Platform.

### Submission

Make an offer for the RFP with a new project or one you've already uploaded – all within the Platform. Receive notification of next steps within 1-2 weeks.

### Selection

If your project is selected, LevelTen facilitates an introduction to the buyer and may facilitate commercial negotiations.

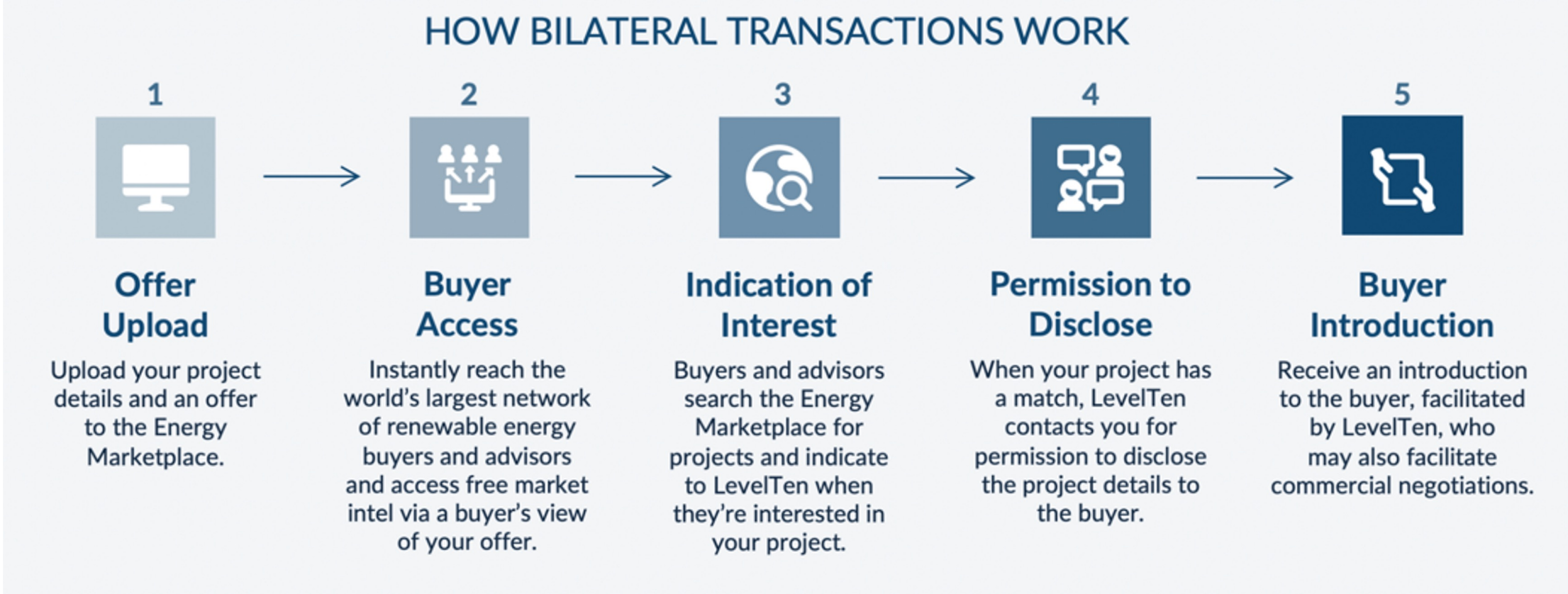
### Feedback

Receive personalized feedback on your RFP offer, regardless of whether your project is selected.

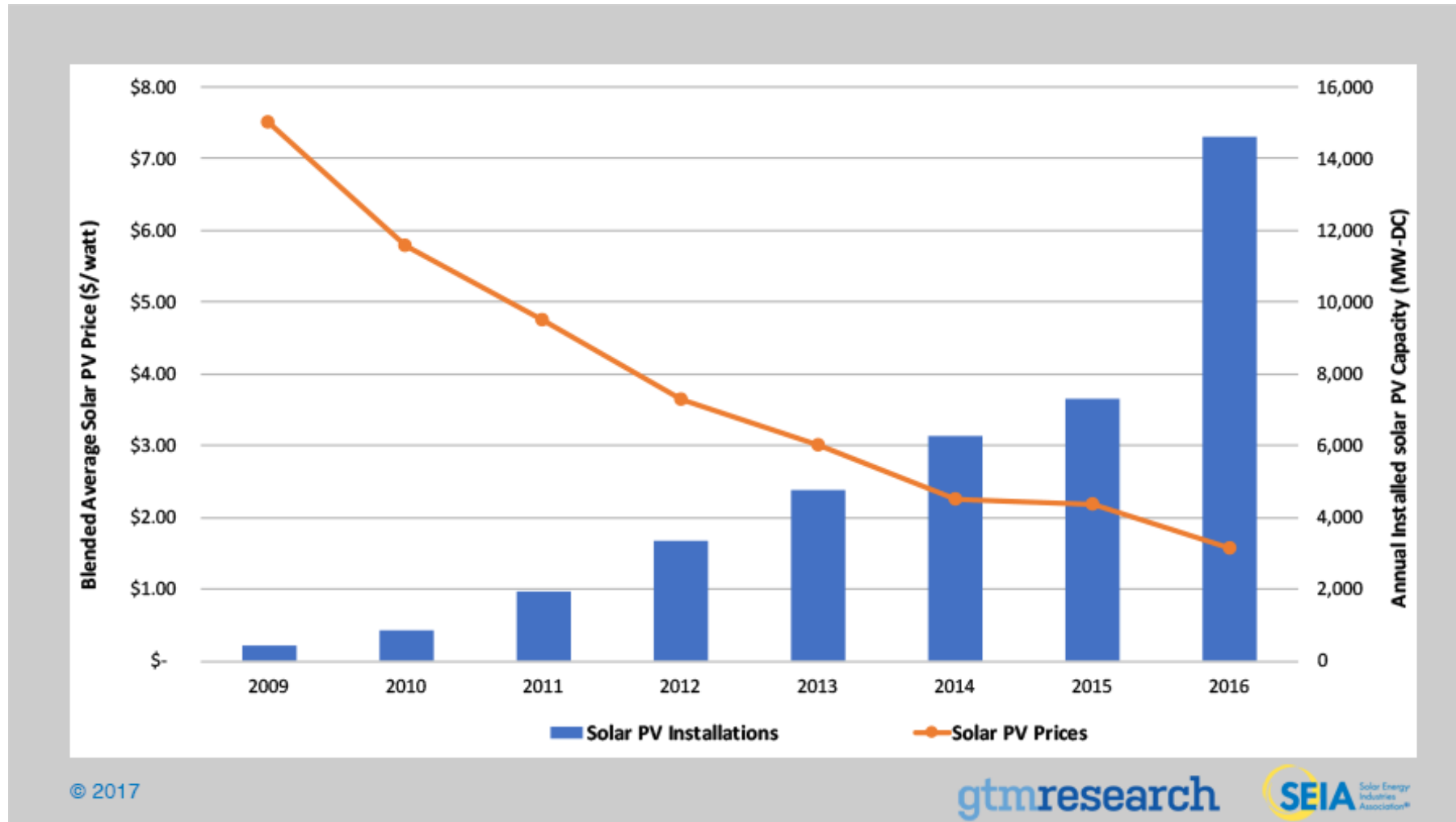




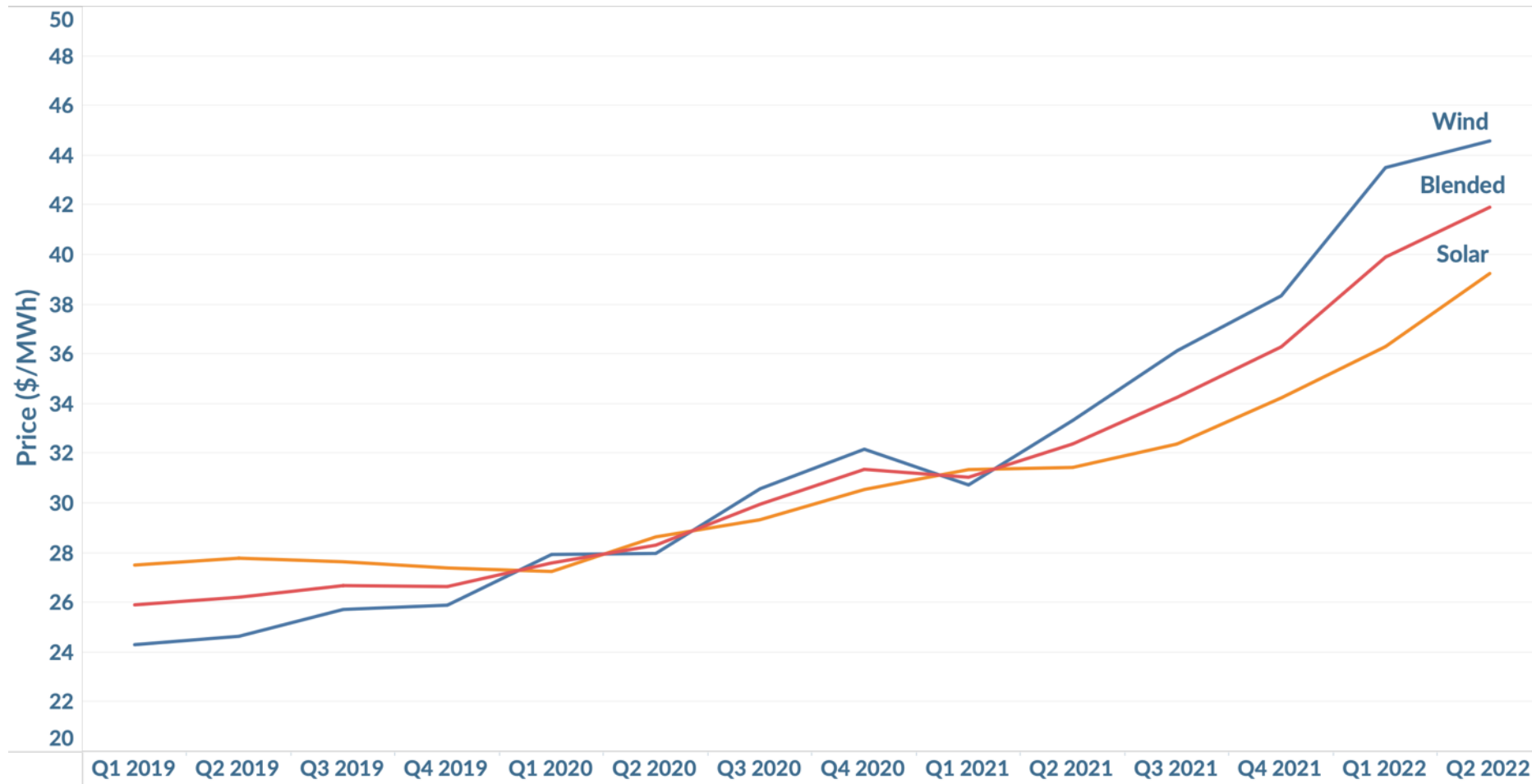
# Bilateral Pathway: How It Works



# Pricing's Race to the Bottom



# Pricing's Direction Now



# What is impacting pricing now?

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## Supply is constricted:

- Grid infrastructure/ interconnection delays and costs
- Land and permitting
- Co-located storage and offshore wind buildout will take time

## Demand is rising:

- The *brand value* of investing in renewable energy PPAs is rising; there's increased scrutiny on greenwashing
- Electricity demand is rising with push for electrification and net zero data centers



# What Buyers & Sellers are Saying

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## **Buyers are proceeding:**

- 36% of LevelTen's advisor partners said that their clients' sustainability timelines remain non-negotiable and they are moving forward as planned
- 18% expressed even more interest in PPAs as a means of hedging electricity costs

## **Sellers are looking for more flexibility in contracts:**

- Indexing PPA prices to changes in commodities prices, and being open to reopening price negotiations within 10-25% of the original price, cited as desirable terms



# Points of Friction

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- **Finance and accounting:** Education and communication are key to helping teams understand terms
- **Legal:** The longer a review takes, the more likely a price will change



# Contact Us

**[Info@leveltenenergy.com](mailto:Info@leveltenenergy.com)**

**[LevelTenEnergy.com](http://LevelTenEnergy.com)**

LevelTen Energy, Inc. (LevelTen) is a commodity trading advisor (CTA) registered with the Commodity Futures Trading Commission (CFTC) and is a Member of the National Futures Association (NFA). The information contained herein is provided for general informational purposes only and does not constitute advice regarding the value of or advisability of trading in any commodity interests within the meaning of the Commodity Exchange Act. Commodity interest trading involves substantial risk of loss. Access to or use of the information contained herein does not establish a "client" or "customer" relationship with LevelTen within the meaning of the CFTC's regulations.



A photograph of two workers in safety gear (hard hats and high-visibility vests) reviewing plans at a wind farm. The background shows several wind turbines under a bright sky. The image is partially covered by a blue diagonal overlay on the left side.

# **CORPORATE PROCUREMENT: ENABLING ACCESS FOR RE BUYERS**

Renewable Energy Markets Conference

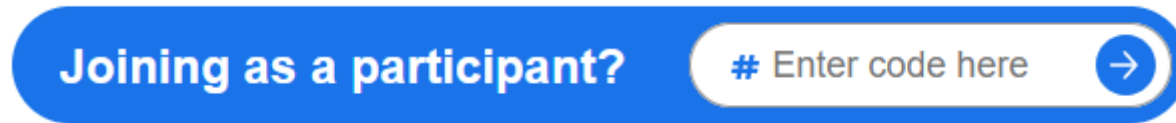
Minneapolis, Minnesota

September 16, 2022



# How to Participant in Today's Survey

- Take out your phone
- On your phone's browser navigate to [www.slido.com](http://www.slido.com)
- Find the blue bar that looks like:



Joining as a participant? # Enter code here →

- Enter the following participant code: **#3237976**
- Select an answer to the poll question



**What type of organization are you representing at this conference?**

Participants can join at [slido.com](https://www.slido.com) with **#3237976**

slido



**What type of organization are you representing at this conference?**

ⓘ Start presenting to display the poll results on this slide.

**If you had to choose an available supply option based on its impact, which would you choose?**

Participants can join at  
[slido.com](https://www.slido.com) with **#3237976**

# slido



**If you had to choose an available supply option based on its impact, which would you choose?**

ⓘ Start presenting to display the poll results on this slide.

A wooden ladder is shown from a low angle, receding into the distance. At the top of the ladder, there is a large, bright blue circle. The background is dark, making the ladder and the circle stand out.

**Which renewable electricity supply option is most accessible to consumers?**

**Participants can join at [slido.com](https://www.slido.com) with **#3237976****

slido

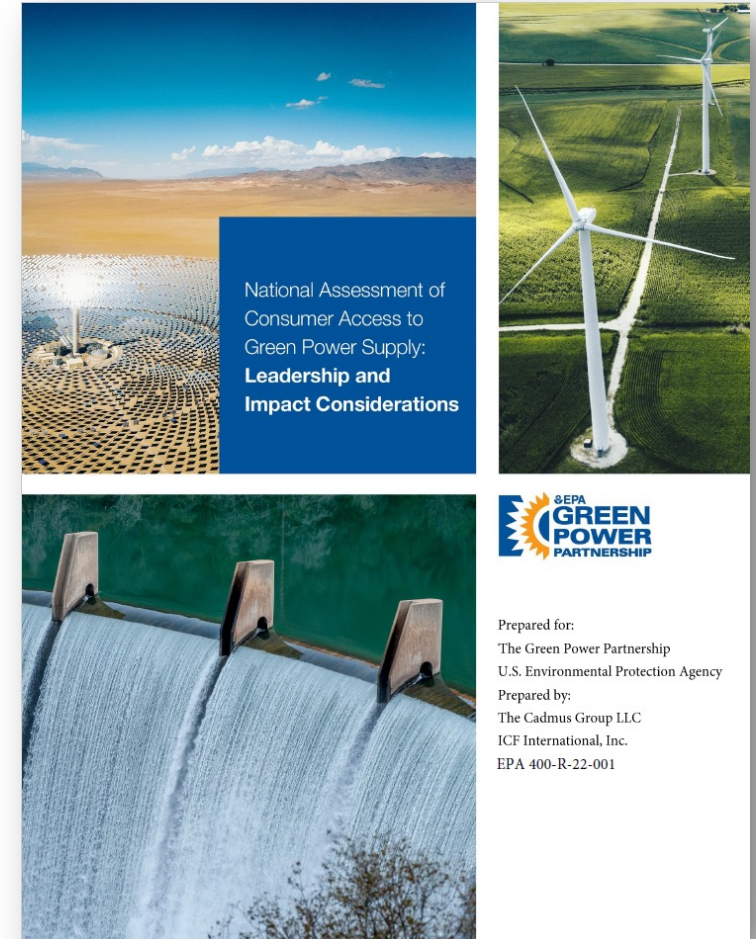


**Which renewable electricity supply option is most accessible to consumers?**

ⓘ Start presenting to display the poll results on this slide.

# What's Access got to do with it?

- EPA Report: National Assessment of Consumer Access to Green Power Supply: Leadership and Impact Considerations
  - [https://www.epa.gov/system/files/documents/2022-05/EPAGreenPowerAccessAssessment-Dec2021\\_508.pdf](https://www.epa.gov/system/files/documents/2022-05/EPAGreenPowerAccessAssessment-Dec2021_508.pdf)





## What EPA sought to answer

- How many consumers in the U.S. have access to each green power supply option?
- What percentage of consumers have access to different green power options?
- What percentage of utility electricity sales could be covered by each supply option?
- What percentage of consumers have access to at least one green power supply option other than RECs? Does this vary between residential and non-residential consumers?

# Summary of Renewable Energy Access by Supply Option

Procurement Option	Number of States with RE Access	Total RE Access by Supply Option		Total RE Access Compared to Total U.S. Electricity Consumption	
		Customers (in millions)	Electricity Sales (TWh)	Percent of Total U.S. Electricity Customers	Percent of Total U.S. Electricity Sales
Renewable Energy Tariffs	16	3.2	76	2.4%	2.4%
Utility Green Pricing Programs	37	58.3	1,097	43.0%	35.0%
Green Power Marketing Products	19	45.2	1,017	33.0%	32.2%
Physical Power Purchase Agreements	27	21.8	659	15.9%	20.9%
Financial Power Purchase Agreements	50	0.21	756	0.2%	23.9%
Community Solar/Shared Renewables	17	54.3	270	40.0%	8.6%
Community Choice Aggregation	7	3.3	9	2.4%	0.3%
On-Site Generation	48*	33.7	570	24.7%	18.1%

# Report Findings

- Who and where you are in the US makes a difference regarding one's access to green power
  - An estimated 19.2 million residential consumers (~16% of total U.S. residential consumers) and 3.7 million non-residential consumers (~22% of total U.S. non-residential consumers) do not have access to any green power supply option other than RECs
  - Except for RECs, no individual procurement option covers more than half of electricity consumers or half of the total U.S. electricity sales
- There is still much work to be done in today's market to make green power supply more widely accessible

# Consumer Access and Impact

## Colorado

Financial Contract (VPPA)

Power Purchase Agreement ✓

Utility Green Tariff ✓

Shared Solar

Self-generation

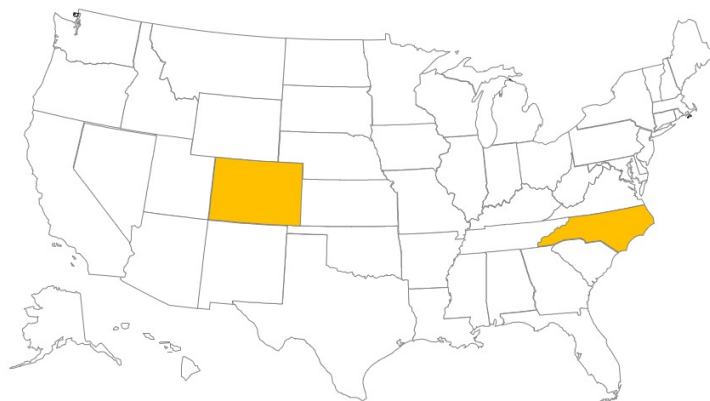
CCAs

Utility Green Pricing ✓

Competitive Green Marketing

Retail RECs ✓

*Who you are and where you are may dictate your opportunity for having impact*



## North Carolina

Financial Contract (VPPA)

Power Purchase Agreement

Utility Green Tariff

Shared Solar

Self-generation

CCAs

✓ Utility Green Pricing

Competitive Green Marketing

✓ Retail RECs

## Buyer Qualities

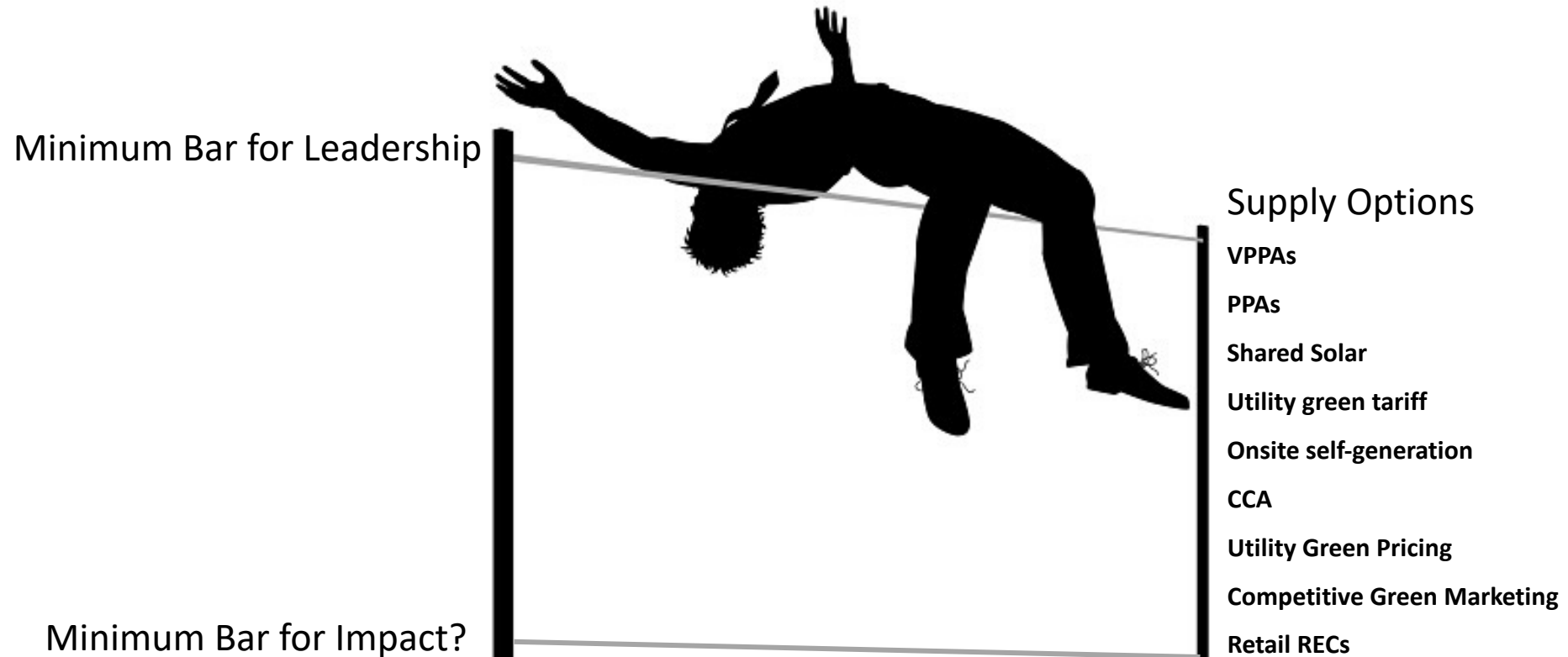
Consumes less than 10,000 MWh annually

Does not own its own buildings

Requires RECs to substantiate use claims

# Impact and Leadership Considerations

*All consumption of and demand for green power is impactful*



# Leadership, Access and Impact are Highly Related





James Critchfield  
EPA's Green Power Partnership  
[Critchfield.James@epa.gov](mailto:Critchfield.James@epa.gov)

For more information, visit

[www.epa.gov/greenpower](http://www.epa.gov/greenpower)

# Corporate Procurement: Enabling access to and projects for renewable energy buyers

Procurement Analysis Tool

Sushmita Jena  
National Renewable Energy Laboratory

Renewable Energy Markets Conference 2022  
Minneapolis



# National Renewable Energy Laboratory (NREL)

1,800

**Employees,**  
plus more than  
**400**

early-career researchers  
and visiting scientists



**World-class**  
facilities, renowned  
technology experts

nearly  
**750**

**Partnerships**  
with industry,  
academia, and  
government



**Campus**  
operates as a  
living laboratory

**\$872M**  
annually

**National  
economic  
impact**

# Goals

- What energy procurement options exist by location?
- How do energy procurement options align with certain end user objectives?
- What renewable and storage resources might be more cost-effective by location?
- How do different resources and procurement options vary on costs/impacts?

# Key Project Dates

Finalize  
Software  
Requirements

2/28/21

Develop Tool  
MockUp

5/31/21

Finalize  
VAPOR  
Updates

11/31/21

Alpha Tool  
Developed

6/30/22

Beta Tool  
Launch

9/30/22

# Procurement Analysis Tool

[Log In](#)



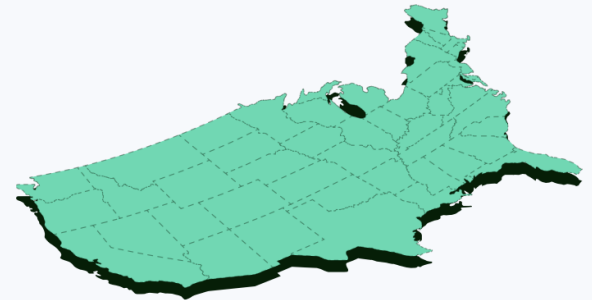
## Procurement Analysis Tool

The first step in utility-scale renewable energy procurement

Whether you're an expert in utility-scale renewable energy or are just starting out, we can help!

[GET STARTED](#)

[LEARN MORE](#)



# Workflow

BASIC INFO

LOCATIONS

FILTERS

RESULTS

BASIC INFO

### Create a procurement scenario

Include a descriptive name for your scenario, and any notes you may need.

TITLE\*

NREL

NOTES

NREL facilities in CO

### What are your energy goals?

What percentage of your total power needs should be supplied by renewables?  
% RENEWABLE ENERGY GOAL\*

100

Should a percentage of this total power be excluded in our calculations?

Behind-the-Meter Carve-Outs? ⓘ

% BEHIND-THE-METER

10

Cancel create scenario

LOCATIONS

### Provide location and energy data

Load Aggregation Groups are a grouping of your facilities' location and energy load. They are organized by color and shown on the map. Groups are calculated independently from each other in the final analysis. You may return here later to edit them. Include at least 1 group and facility to proceed.

+ add group

Colorado - Golden+Boulder+Flatiron

options \* + add location

DC

options \* + add location

Alaska - Fairbanks

options \* + add location

Filter Procurement Options

### Energy Procurement Contracting

Do you have, or are willing to acquire, significant energy and financial transaction experience needed to carry out a virtual power purchase agreement? ⓘ

YES NO UNSURE

### Financial

Are you willing to take on financial risk associated with energy procurement? ⓘ

YES NO UNSURE

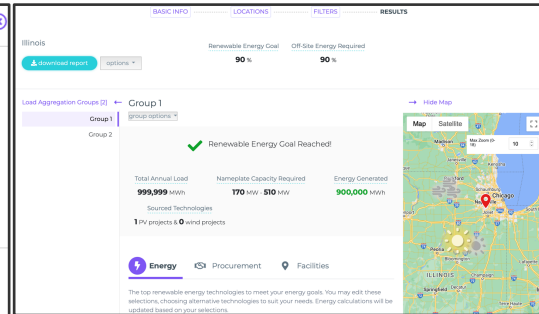
Do you prefer a procurement option with long-term price certainty? ⓘ

YES NO UNSURE

### Environmental

Do you wish to own the renewable energy credits (RECs)? ⓘ

YES NO UNSURE



# Scenarios & inputs

BASIC INFO

LOCATIONS

FILTERS

RESULTS

BASIC INFO

## Create a procurement scenario

Include a descriptive name for your scenario, and any notes you may need.

TITLE\*

NOTES

## What are your energy goals?

What percentage of your total power needs should be supplied by renewables?

% RENEWABLE ENERGY GOAL\*

Should a percentage of this total power be excluded in our calculations?

Behind-the-Meter Carve-Outs? ⓘ

Cancel

create scenario

# Facility Details

[save for later](#)

## LOCATIONS

### Provide location and energy data

Load Aggregation Groups are a grouping of your facilities' location and energy load. Groups are calculated independently from each other in the final analysis. You may include at least 1 group and facility to proceed.

+ add group

Colorado - Golden+Boulder+Flatiron

options ▾

+ add location

DC

options ▾

+ add location

Alaska - Fairbanks

options ▾

+ add location

[back](#)

TITLE\*

NREL

ANNUAL LOAD (MWh)\*

1,000,000

Location

Choose a location on the map or use the place lookup

PLACE LOOKUP

Golden, CO, USA

ADDRESS (OPTIONAL)

CITY (OPTIONAL)

Golden

STATE\*

Colorado ▾

LATITUDE\*

39.75554

LONGITUDE\*

-105.2211

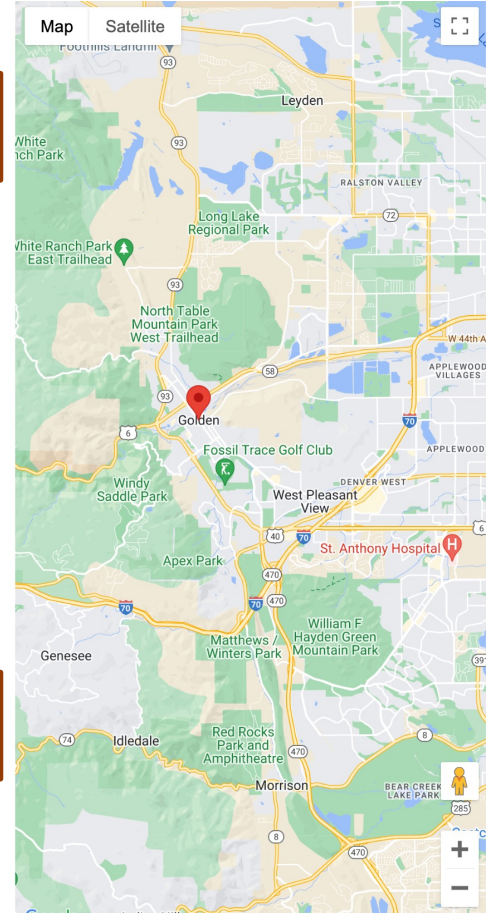
Utility\*

PUBLIC SERVICE CO OF COLORADO (XCEL ENER) ▾

lookup utility company

cancel

+ add site



# Locations Summary



Scenarios

Sushmita Jena ▾

BASIC INFO

LOCATIONS

FILTERS

RESULTS

NREL

[save for later](#)

LOCATIONS

## Provide location and energy data

Load Aggregation Groups are a grouping of your facilities' location and energy load. They are organized by color and shown on the map. Groups are calculated independently from each other in the final analysis. You may return here later to edit them. Include at least 1 group and facility to proceed.

[+ add group](#)

📍 Colorado - Golden+Boulder+Flatiron

options ▾

[+ add location](#)

Name	Utility	State	Power Market	Annual Load MWh
NREL	PUBLIC SERVICE CO OF COLORADO (XCEL ENERGY)	Colorado	PSC	1,000,000

📍 DC

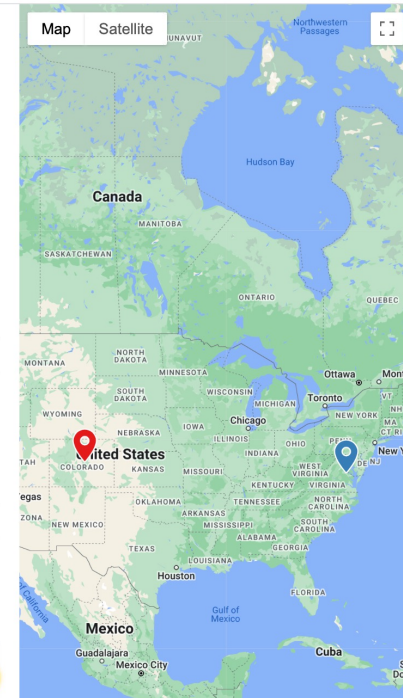
options ▾

[+ add location](#)

Name	Utility	State	Power Market	Annual Load MWh
NREL DC	POTOMAC ELECTRIC POWER CO (PEPCO HOLDINGS INC)	District of Columbia	PJM	500,000

[back](#)

[save & continue](#)





# Filter Questions

- Energy Contracting
- Financial
- Environmental
- Grid Impact
- Geography

→ Filter Procurement Options



## Energy Procurement Contracting

Do you have, or are willing to acquire, significant energy and financial transaction experience needed to carry out a virtual power purchase agreement?

YES  NO  UNSURE

## Financial

Are you **willing to take on financial risk** associated with energy procurement?

YES  NO  UNSURE

Do you prefer a procurement option with **long-term price certainty**?

YES  NO  UNSURE

## Environmental

Do you wish to **own the renewable energy credits (RECs)**?

YES  NO  UNSURE

## Grid Impact

Do you want to prioritize lowest cost, highest indirect emission impact, grid value, or all three combined?

COST  EMISSIONS  GRID VALUE  
 COMBINED

## Geography

Do you have a **preference on where the project is located**?

YES  NO

Site renewable project in the **same state as at least one facility** in the group?

YES  NO

Site renewable project in the **same power market as at least one facility** in group?

YES  NO

# Procurement Options based on filter questions

BASIC INFO

LOCATIONS

FILTERS

RESULTS

Illinois

[save for later](#)

## FILTERS

### Refine procurement pathways

Answering the following questions will determine the appropriate procurement options based on the location data you've provided.

You will be able to edit these choices after the analysis.

1 / 6

[why do we ask this?](#)

Energy Procurement Contracting

Do you have, or are willing to acquire, significant energy and financial transaction experience needed to carry out a virtual power purchase agreement?

[YES](#)

[NO](#)

[UNSURE](#)

[next >](#)

## Procurement Pathways for Scenario

Some procurement options may not be available for individual facility groups due to minimum and maximum power requirements. Any procurement options that are unavailable due to power requirements are shown as such on the results page.

### Available Options

[Virtual Power Purchase Agreement](#)

[Community Solar](#)

### Unavailable Options

(based on answers to Filter Questions)

[Utility Green Pricing](#)

[Unbundled Renewable Energy Certificates](#)

[Competitive Supplier](#)

## Load Aggregation Groups

### Group 1

Name	Utility	Annual Load MWh
Naperville	CITY OF NAPERVILLE - (IL)	1,000,000
<a href="#">Utility Green Pricing</a> <a href="#">Unbundled Renewable Energy Certificates</a> <a href="#">Competitive Supplier</a> <a href="#">Virtual Power Purchase Agreement</a>		

### Group 2

Name	Utility	Annual Load MWh
Orlando Park	COMMONWEALTH EDISON CO (EXELON CORP)	500,000
<a href="#">Community Solar</a> <a href="#">Unbundled Renewable Energy Certificates</a> <a href="#">Competitive Supplier</a> <a href="#">Virtual Power Purchase Agreement</a>		

[back](#)

[view results](#)

# Results – Renewable Technology

PAT Scenarios

Sushmita Jena

BASIC INFO LOCATIONS FILTERS RESULTS

Illinois

download report options

Renewable Energy Goal 90%  
Off-Site Energy Required 90%

Load Aggregation Groups [2] Group 1 group options

Group 2

Renewable Energy Goal Reached!

Total Annual Load  
999,999 MWh

Nameplate Capacity Required  
170 MW - 510 MW

Energy Generated  
900,000 MWh

Sourced Technologies  
1 PV projects & 0 wind projects

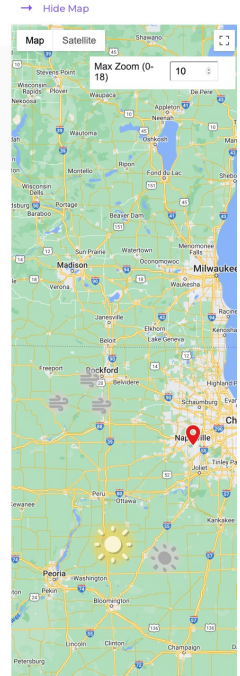
Energy Procurement Facilities

The top renewable energy technologies to meet your energy goals. You may edit these selections, choosing alternative technologies to suit your needs. Energy calculations will be updated based on your selections.

Combined Cost Emissions Reduction Grid Value

Solutions with combined lowest cost, largest emissions reduction, and greatest grid value.

<input checked="" type="checkbox"/>	Solar	★★★★☆	\$\$\$\$\$	★★★☆☆	⚡⚡⚡⚡					
<input checked="" type="checkbox"/>	Solar	★★★★☆	\$\$\$\$\$	★★★☆☆	⚡⚡⚡⚡	Annual Generation 2,200,000 MWh	Name Plate Capacity 1445 MW	Capacity Factor 18%	Battery 100 MW	State Illinois
<input type="checkbox"/>	Solar	★★★★☆	\$\$\$\$\$	★★★☆☆	⚡⚡⚡⚡	Annual Generation 1,100,000 MWh	Name Plate Capacity 735 MW	Capacity Factor 18%	Battery 100 MW	State Illinois
<input type="checkbox"/>	Wind	★★★☆☆	\$\$\$\$\$	★★★☆☆	⚡⚡⚡	Annual Generation 450,000 MWh	Name Plate Capacity 109 MW	Capacity Factor 48%	Battery 100 MW	State Illinois
<input type="checkbox"/>	Wind	★★★☆☆	\$\$\$\$\$	★★★☆☆	⚡⚡⚡					



# Results – Procurement Options Review

Load Aggregation Groups [2] ← Group 1

Group 1 group options ▾

Group 2

✓ Renewable Energy Goal Reached!

Total Annual Load

999,999 MWh

Nameplate Capacity Required

170 MW - 510 MW

Energy Generated

900,000 MWh

Sourced Technologies

1 PV projects & 0 wind projects

⚡ Energy



Procurement

📍 Facilities

Below are available procurement options based on your facility information and your answers to the filter questions.

[review procurement filter questions](#)

Virtual Power Purchase Agreement

Utility Green Pricing

Unbundled Renewable Energy Certificates

Competitive Supplier

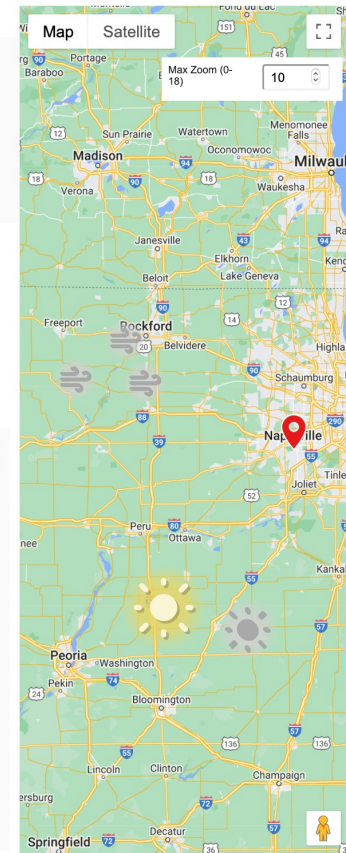
Check procurement options to include them in the scenario results.

## Virtual Power Purchase Agreement

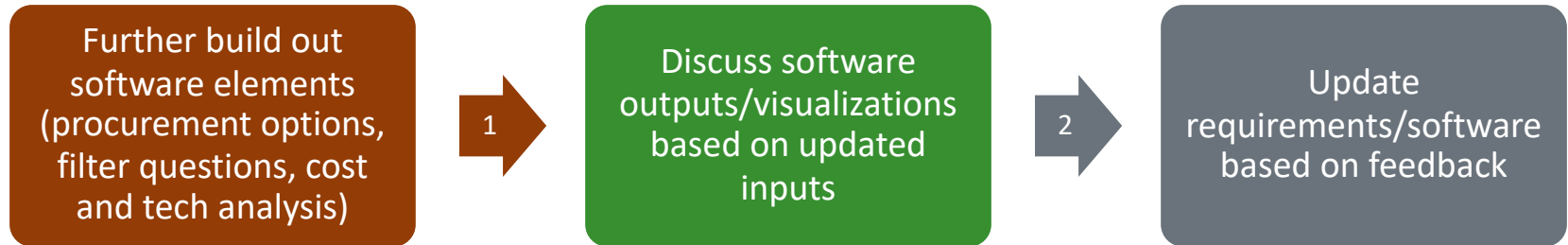
A power purchase agreement (PPA) is a financial agreement where a developer arranges for the design, permitting, financing and installation of the utility-scale renewable energy system. The corporate customer can sign a long-term contract with the developer directly to secure physical (physical PPA) or financial rights (virtual PPA) to electricity generation and the environmental attributes of a project (RECs). This tool assumes the user pursues a virtual PPA.

Location			Price in ¢/kWh						Utility Project
			National		Balancing Authority		Utility		
State	Balancing Authority	Utility	Wind	Solar	Wind	Solar	Wind	Solar	No. Projects
IL	PJM	CITY OF NAPERV...	3.42	3.84	4.31	4.77	-	-	-

→ Hide Map



# Next Steps



If you are willing to test the beta version of the tool, please write to me at:

Sushmita Jena  
sushmita.jena@nrel.gov

Questions?

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[www.nrel.gov](http://www.nrel.gov)

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.



Extra

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# Results – Facilities

NREL

Renewable Energy Goal: **100 %** Behind-the-Meter Carve-Outs: **10 %** Off-Site Energy Req: **90 %**

download report options

REopt analysis

Load Aggregation Groups [2] ← Colorado - Golden+Boulder+Flatiron

Colorado - Golden+Boulder+Flatiron

group options

DC

Renewable Energy Goal Reached!

Total Annual Load	Nameplate Capacity Required	Energy Generated	Sourced Technologies
999,999 MWh	170 MW - 510 MW	900,000 MWh	1 PV projects & 0 wind projects

Energy Procurement **Facilities**

Review facility information. Procurement options are shown per facility.

Name	Utility	State	Power Market	Annual Load MWh
NREL	PUBLIC SERVICE CO OF COLORADO (XCEL ENERGY)	Colorado	PSC	1,000,000

Utility Green Pricing Community Solar **Green Tariff** Unbundled Renewable Energy Certificates

→ Procurement Options

Facility  
NREL  
Utility Company  
PUBLIC SERVICE CO OF  
COLORADO (XCEL ENERGY)

## Green Tariff

Utility specific procurement option notes:

- Maximum participation is lower of 1) 100% of previous year's use or 10% of total capacity of Renewable\* Connect. Corporate entities with multiple premises cannot subscribe to more than 40% of R\*C, and not to exceed 100% of that premise's energy consumption.
- It is not explicitly stated in the filing if aggregation of meters allowed.
- There is an admin fees of included in customer cost structure on a per kWh charge.
- Xcel will either retire RECs on behalf of the subscribing customer or transfer RECs to a Western Renewable Energy Generation Information System account.
- The program is available for C&I sector.

Utility specific constraints:

- Max program capacity in mW: 50



# Procurement Options based on filter questions



Scenarios

Sushmita Jena

BASIC INFO

LOCATIONS

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Illinois

save for later

FILTERS

## Refine procurement pathways

Answering the following questions will determine the appropriate procurement options based on the location data you've provided. You will be able to edit these choices after the analysis.

1 / 6

[why do we ask this?](#)

Energy Procurement Contracting

Do you have, or are willing to acquire, significant energy and financial transaction experience needed to carry out a virtual power purchase agreement?

YES

NO

UNSURE

[next >](#)

## Procurement Pathways for Scenario

Some procurement options may not be available for individual facility groups due to minimum and maximum power requirements. Any procurement options that are unavailable due to power requirements are shown as such on the results page.

### Available Options

Virtual Power Purchase Agreement

Community Solar

### Unavailable Options

(based on answers to Filter Questions)

Utility Green Pricing

Unbundled Renewable Energy Certificates

Competitive Supplier

## Load Aggregation Groups

Group 1

Name	Utility	Annual Load MWh
Naperville	CITY OF NAPERVILLE - (IL)	1,000,000

Utility Green Pricing Unbundled Renewable Energy Certificates Competitive Supplier Virtual Power Purchase Agreement

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# Procurement Options based on filter questions



Scenarios

Sushmita Jena ▾

BASIC INFO

LOCATIONS

FILTERS

RESULTS

Illinois

save for later

FILTERS

## Refine procurement pathways

Answering the following questions will determine the appropriate procurement options based on the location data you've provided.

You will be able to edit these choices after the analysis.

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[why do we ask this?](#)

Energy Procurement Contracting

Do you have, or are willing to acquire, significant energy and financial transaction experience needed to carry out a virtual power purchase agreement?

YES

NO

UNSURE

next >

## Procurement Pathways for Scenario

Some procurement options may not be available for individual facility groups due to minimum and maximum power requirements. Any procurement options that are unavailable due to power requirements are shown as such on the results page.

### Available Options

Community Solar

### Unavailable Options

(based on answers to Filter Questions)

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## Load Aggregation Groups

Group 1

Name	Utility	Annual Load MWh
Naperville	CITY OF NAPERVILLE - (IL)	1,000,000

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