American Cities Climate Challenge
RENEWABLES ACCELERATOR

EPA GREEN POWER PARTNERSHIP®

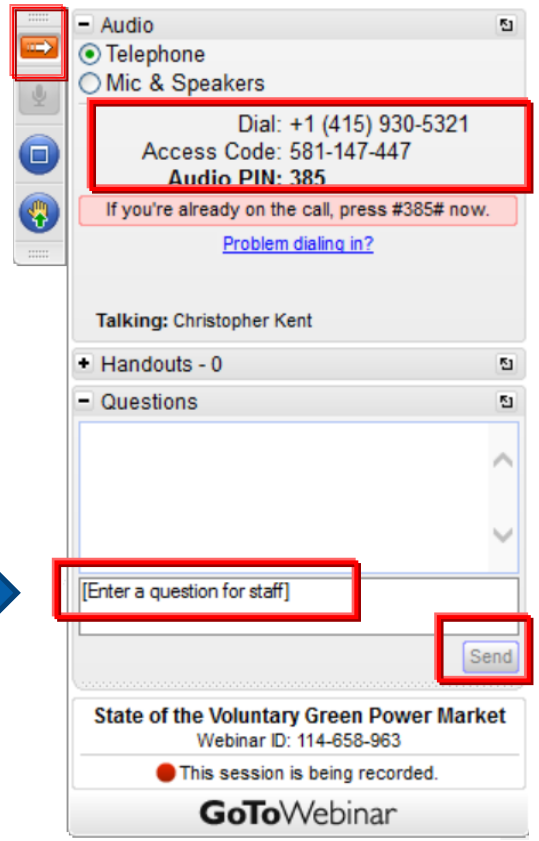
WORLD RESOURCES INSTITUTE

LOCAL GOVERNMENT CLEAN ENERGY TRENDS AND RESOURCES

JULY 8, 2020

WEBINAR LOGISTICS

Open and close your control panel



Audio is available via:

- computer's microphone and speakers (VoIP)
- telephone:

+1 (213) 929-4232
D: 306-684-327

Type your questions here

Hit “send” to submit your questions

If you experience any technical difficulties, please contact Meredith Outterson at: Meredith.Outterson@erg.com

SPEAKERS

- **Christopher Kent**, Program Manager, U.S. EPA's Green Power Partnership
- **Lacey Shaver**, Renewable Energy Manager, World Resources Institute
- **Steve Abbott**, Carbon-Free Cities & States Manager, Rocky Mountain Institute
- **Heather Bolick**, Energy & Sustainability Coordinator, City of Charlotte
- **Katie Riddle**, Sustainability Analyst, City of Charlotte
- **Patricia Gómez**, Resilience/Energy Program Manager, Miami-Dade County

AGENDA

- Webinar logistics and GPP overview
- Renewables Accelerator program overview
- WRI Tools & Resources Library showcase
- New Local Government Renewables Action Tracker overview
- Perspective from Charlotte, NC
- Perspective from Miami-Dade
- Question and Answer session

Green Power Partnership Overview

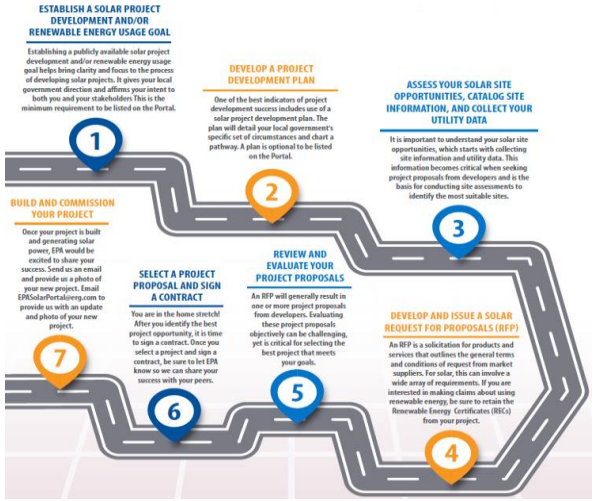
- **Summary**
  - The U.S. EPA's Green Power Partnership is a voluntary program that encourages organizations to use green power
- **Objectives**
  - Educate stakeholders on voluntary procurement options within the U.S. renewable energy market
  - Recognize leadership in REC-based green power procurement
  - Motivate stakeholders to expand engagement in green power market
  - Standardize green power procurement as part of best management practice
- **Program Activities**
  - Provide technical assistance and tools on procuring green power
  - Provide recognition platform on organizational use of green power

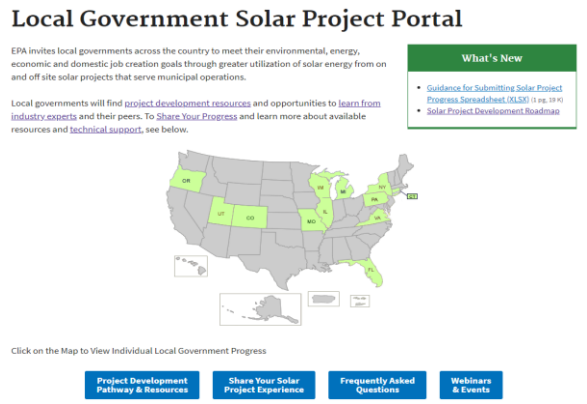
- +1000 Partners procure more than 67 billion kWh annually, equivalent to the annual electric use of more than 6.2 million American homes.

EPA GREEN POWER PARTNERSHIP

Solar Project Portal Overview

- **Solar Project Portal Home Page**
  - Recognizes municipalities seeking to develop solar projects
  - The project list serves as a peer exchange platform where you can identify examples of milestones achieved by other municipal governments
- **Project Development Pathway & Resources**
  - Identifies in detail the 7 steps of project development
  - Offers key resources and tools to assist you in achieving each step
- **Share Your Solar Project Experience**
  - Describes how to have your municipality listed on the Portal Home Page
  - Here you will find information on how to update EPA on your progress
  - Find information regarding upcoming Peer Exchange and Workshop events
- **Frequently Asked Questions (FAQ)**
  - Details expert answers to common project development questions
  - Have a question? Submit it on this page and receive an answer



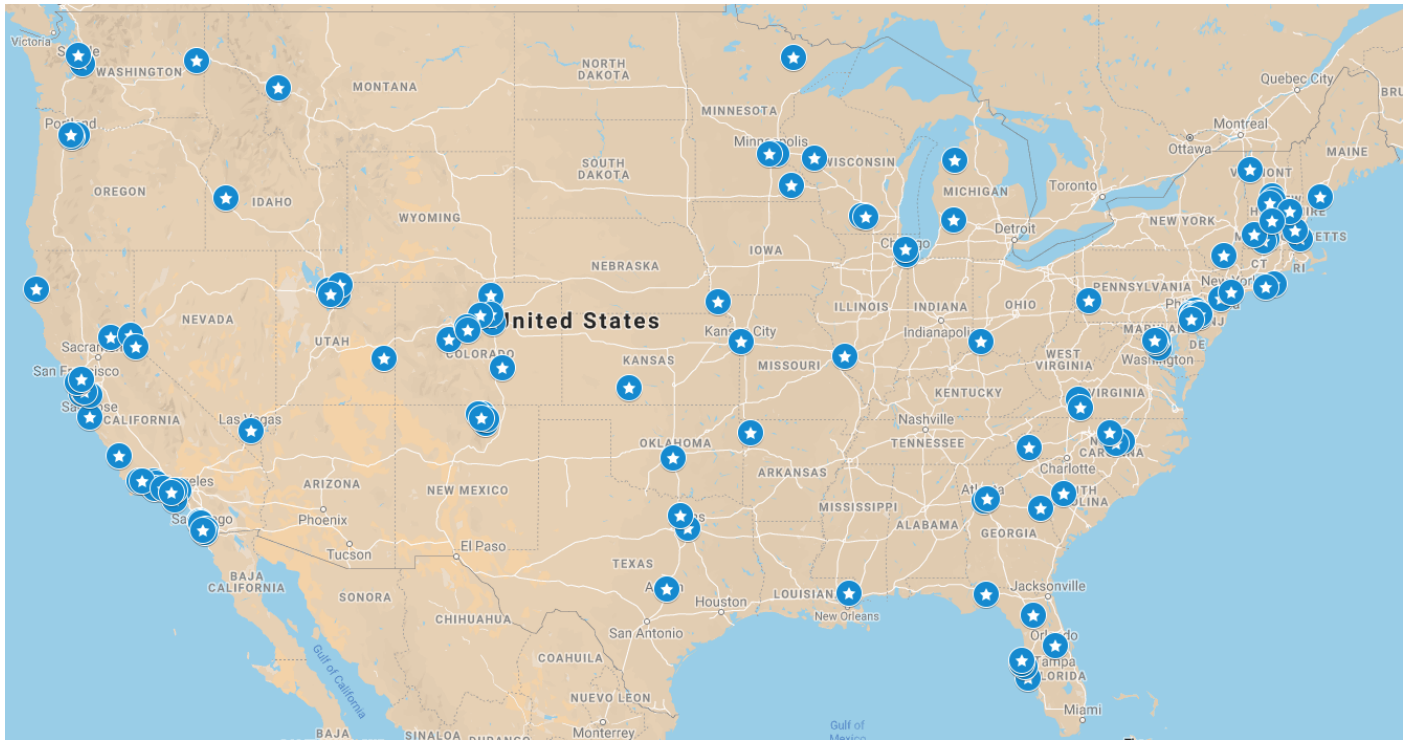


https://www.epa.gov/repowertoolbox/local-government-solar-project-portal

SIMPLIFYING CITY RENEWABLE ENERGY PROCUREMENT

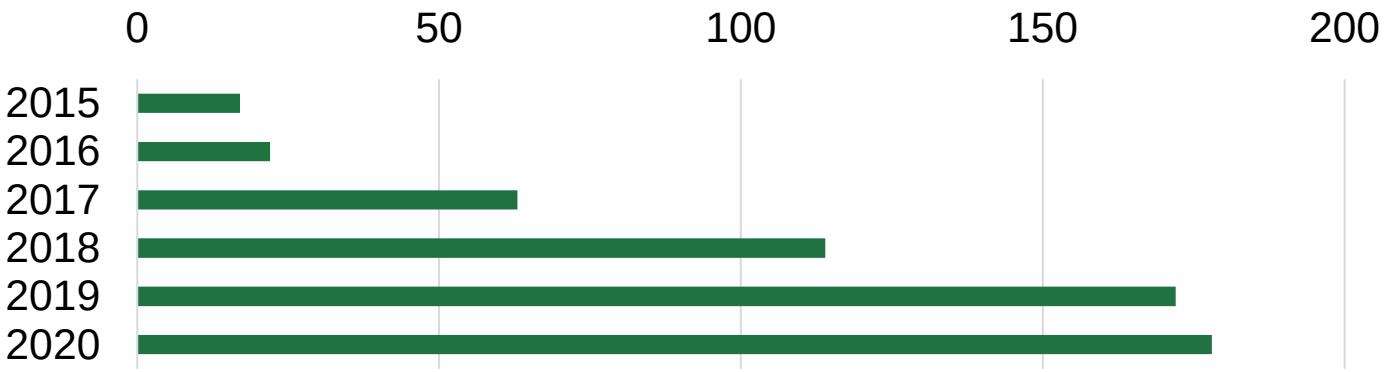
Lacey Shaver and Steve Abbott | July 8, 2020

CITIES AND COUNTIES ARE INCREASINGLY SETTING 100% RE GOALS



Local governments with 100% renewables goals:

- >178 cities spanning 32 states
- >200 TWh of electricity demand



Cumulative growth in the number of city commitments over last few years

LOCAL GOVERNMENTS HAVE MULTIPLE OBJECTIVES FOR TRANSITIONING TO RENEWABLES

- Meet GHG reduction and climate goals
- Procure clean energy for facilities at scale
- Potentially save on energy costs
- Obtain fuel price stability benefits
- Drive new and local renewables projects
- Create jobs and economic benefits
- Obtain community co-benefits:
  - Reduced pollution
  - Health benefits
  - Grid resilience
  - Increased equity and access

CURRENT STATUS OF LOCAL RENEWABLES PROCUREMENT

- Most local governments are staging efforts and addressing renewables for **municipal facilities first**
- However, many cities and counties are developing **implementation plans** and taking steps toward achieving community-wide goals
- Strong focus on stakeholder engagement processes and ensuring that **all customers benefit from the transition** to clean energy
- Cities are focusing on renewable projects that offer co-benefits to **low-income or disadvantaged communities**; **workforce development**
- **New models** are emerging to offer renewable products to community through **utility and third-party offerings**

YET PURCHASING RENEWABLE ENERGY REMAINS CHALLENGING FOR MOST LOCAL GOVERNMENTS

Many cities and counties face barriers relating to:

1

Staff capacity
- Energy projects often require specialized skill and knowledge
- Sustainability staff are already stretched thin with competing tasks

2

Internal buy-in and resource allocation
- Many city staff see renewables projects as risky or expensive
- Renewables must compete for resources and attention

3

External factors
- Options and autonomy may be limited by state policies/regulations
- Renewable development may be limited by natural factors

American Cities Climate Challenge
RENEWABLES ACCELERATOR

ABOUT THE RENEWABLES ACCELERATOR

- Supported by Bloomberg Philanthropies, WRI and RMI provide technical assistance 25 Climate Challeng cities on renewables procurement
- Provide resources a support to 150+ citie and counties throug cohorts with similar interests in partnership with the Urban Sustainability Directors Network

ALBUQUERQUE, NM
ATLANTA, GA
AUSTIN, TX
BOSTON, MA
CHARLOTTE, NC
CHICAGO, IL
CINCINNATI, OH
COLUMBUS, OH
DENVER, CO
HONOLULU, HI
INDIANAPOLIS, IN
LOS ANGELES, CA
MINNEAPOLIS, MN
ORLANDO, FL
PHILADELPHIA, PA
PITTSBURGH, PA
PORTLAND, OR
SAINT PAUL, MN
SAN ANTONIO, TX
SAN DIEGO, CA
SAN JOSE, CA
SEATTLE, WA
ST. LOUIS, MO
ST. PETERSBURG, FL
WASHINGTON, D.C.

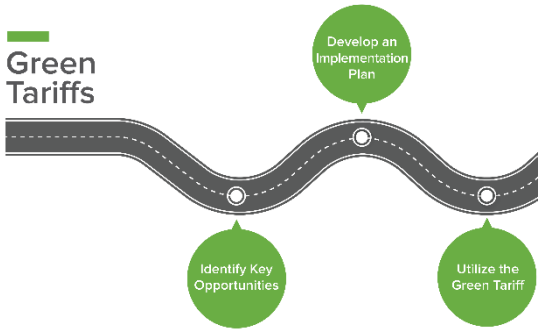
THE RENEWABLES ACCELERATOR SUPPORTS LOCAL GOVERNMENTS VIA:

One-on-one technical assistance

- Provide strategic consulting and technical support to recipients of the American Cities Climate Challenge

Workshops and cohort-based peer learning

- Provide foundational training to city staff through partner networks
- Help groups of cities execute a type of transaction in parallel
- Support collective engagement efforts with utilities, regulators, etc.

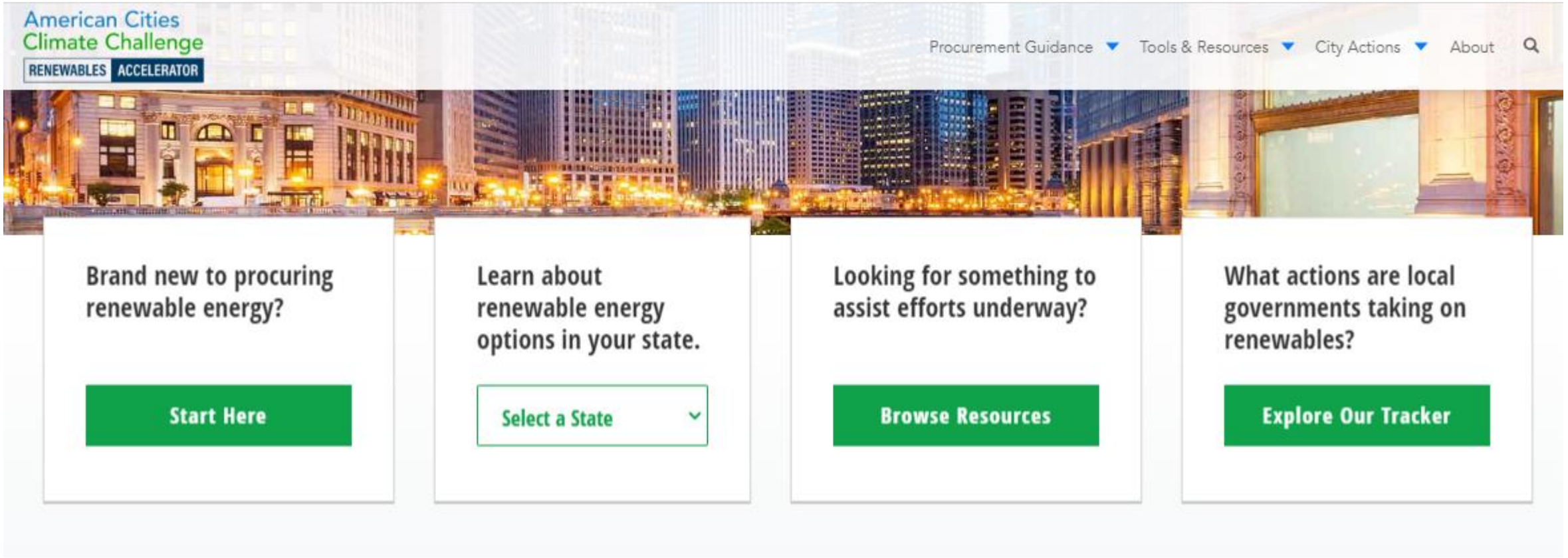


Tools and resources

- Codify the approaches and lessons learned from our individual and collective city engagements
- Develop tools to help city staff overcome specific barriers

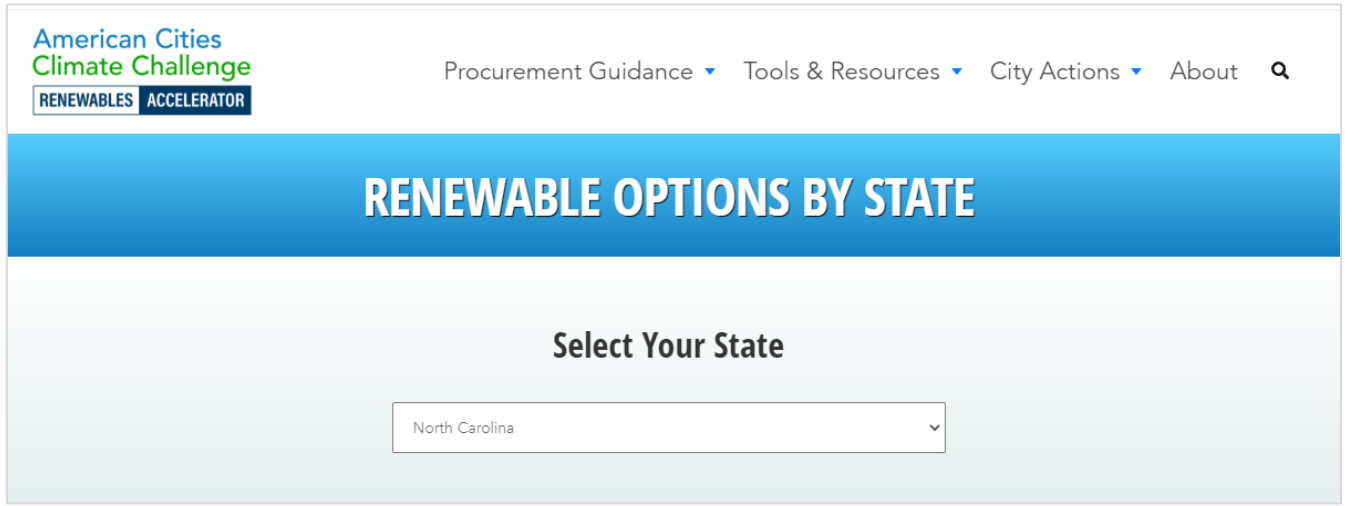
TOOLS TO STREAMLINE RENEWABLE ENERGY PROCUREMENT

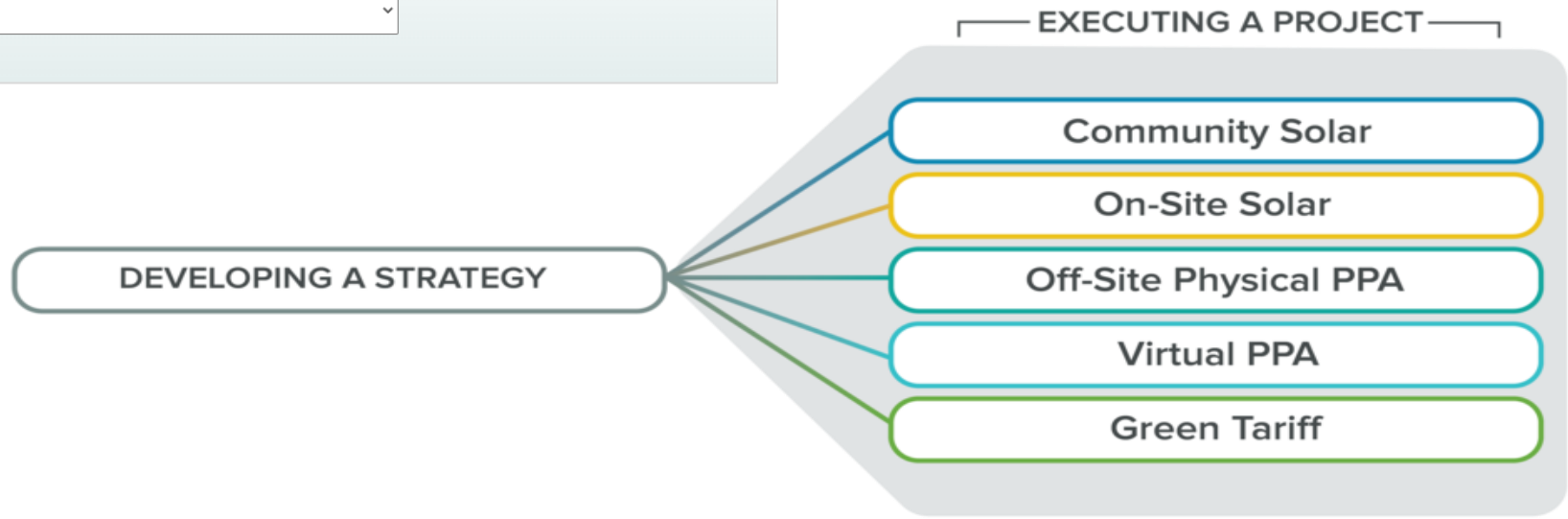
THE RENEWABLES ACCELERATOR WEBSITE IS A ONE-STOP SHOP FOR LOCAL GOVERNMENT STAFF LOOKING FOR RENEWABLE TOOLS AND RESOURCES



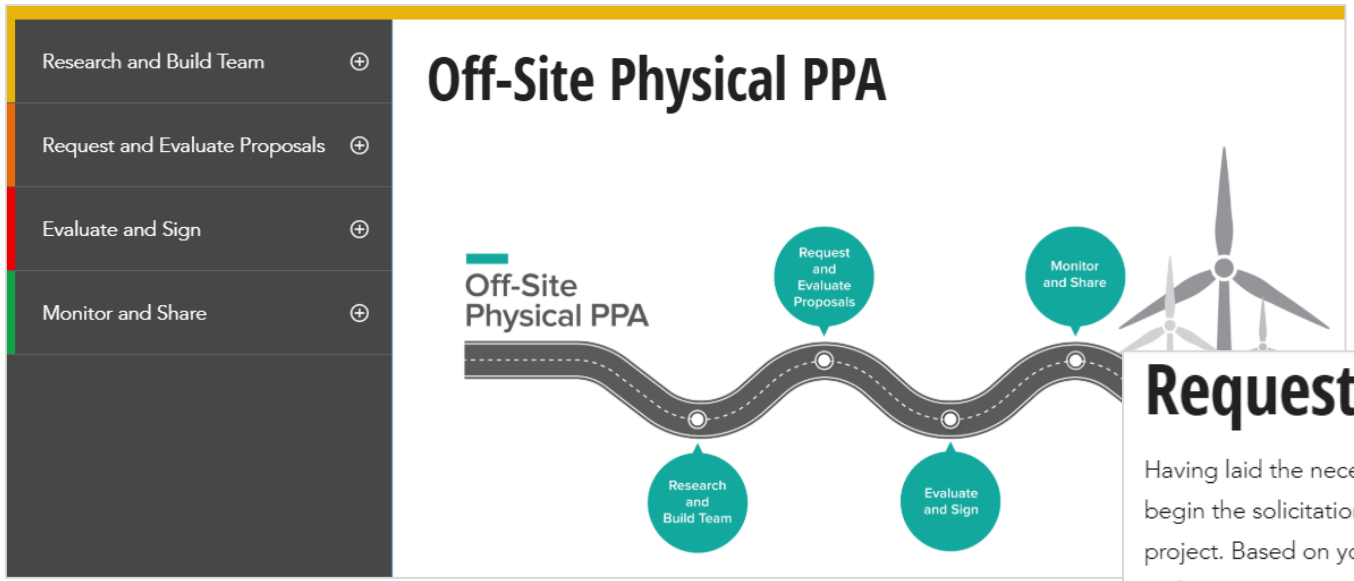
www.cityrenewables.org

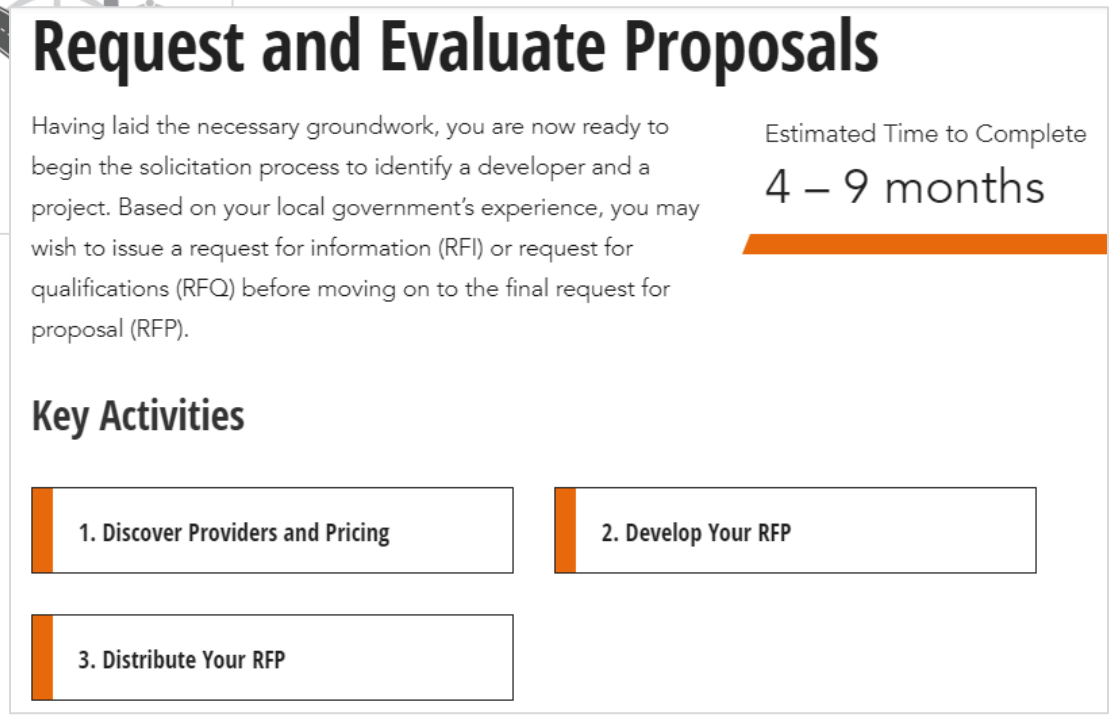
LOCAL GOVERNMENTS JUST GETTING STARTED CAN LEARN ABOUT PROCUREMENT OPTIONS IN THEIR STATE AND HOW TO DEVELOP A STRATEGY





EACH PROCUREMENT PATHWAY IS BROKEN DOWN INTO A SERIES OF KEY ACTIVITIES





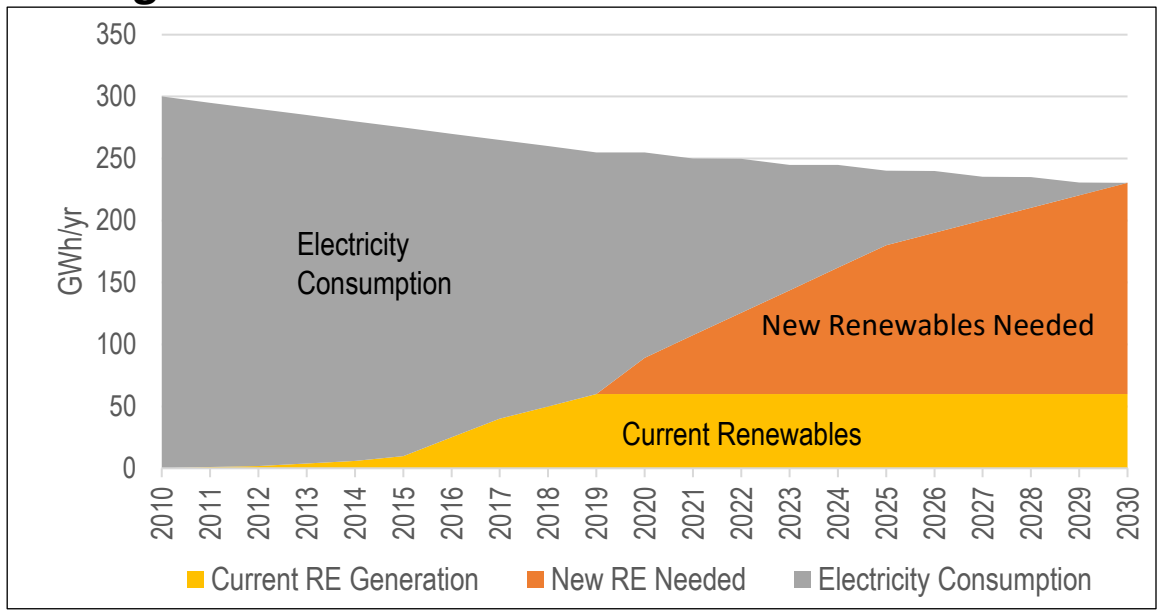
Within each key activity, users can find information on the process, key considerations, information on timelines and staffing, and links to tools, resources, and examples from other cities and counties.

PITCH DECKS HELP LOCAL GOVERNMENT STAFF COMMUNICATE THE BENEFITS OF RENEWABLE ENERGY PROJECTS TO KEY DECISION MAKERS

Example Page

Increases our renewable energy percentage

- [City's] goal is [X%] renewable energy by [20XX].
- We currently generate [X%] renewable energy.
- On-site solar can help close the remaining gap, as maximizing on-site solar can typically provide 10-20% of a city's municipal electric load.



Decreases our greenhouse gas emissions

- A [#] MW project would reduce [#] metric tons of CO_2 equivalent per year.[1]
- This is equivalent to:

[#] vehicle miles driven per year

[#] trees planted per year

[#] homes powered per year

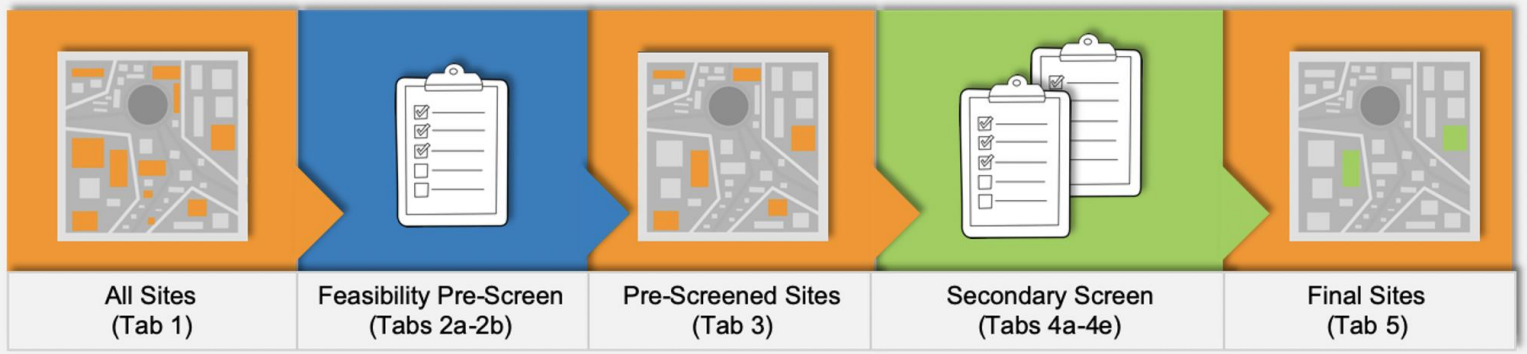
[#] pounds of coal burned per year

THE MUNICIPAL SOLAR SITE SELECTION TOOL PROVIDES STEP-BY-STEP INSTRUCTIONS TO HELP CITIES IDENTIFY THE OPTIMAL PROJECT LOCATIONS

How to use this resource *(MSSST Tutorial available at: https://youtu.be/DPIf7XcyTrM)*

Before using this workbook, we recommend reviewing different renewable energy procurement options on the **American Cities Climate Challenge (ACCC) Renewables Accelerator Procurement Guidance** webpage (hyperlinked below).

Workbook Overview:



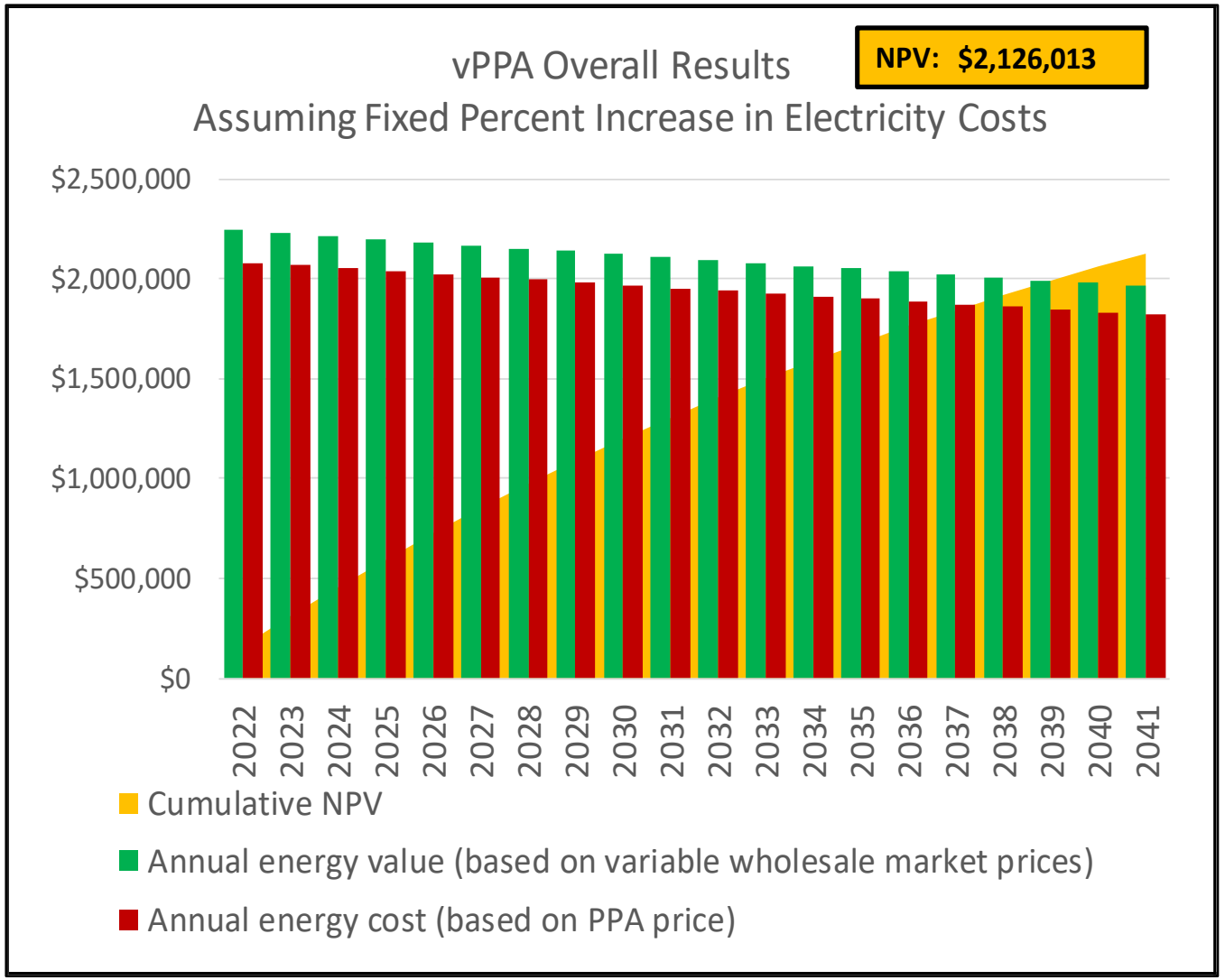
To use this workbook: Work sequentially through the numbered tabs and read the instructions on each page. At a high level, you will follow these steps:

- Identify applicable solar policies, incentives, and goals (*"Policies & Goals" Tab*)
- Identify potential sites for solar PV development (*Tab 1*)
- Conduct a basic pre-screen to create a shortlist of sites (*Tabs 2a, 2b, 3*)
- Conduct a secondary screen of your shortlisted sites (*Tabs 4a-4e*)
- Review results and identify next steps to engage developers in the procurement process (*Tab 5*)

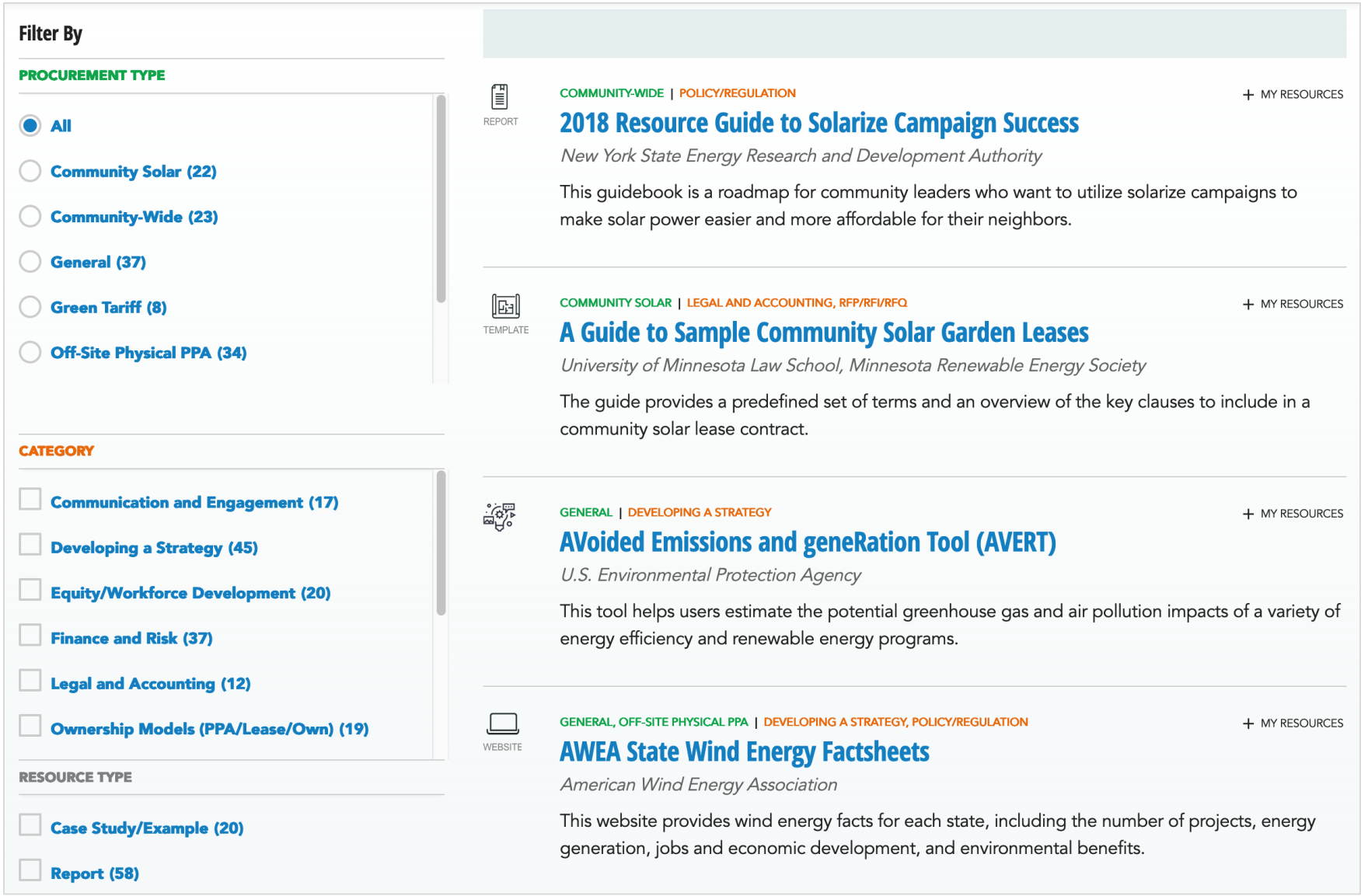
THE SOLAR AND WIND OFF-SITE PPA ECONOMIC CALCULATOR COMBINES GENERATION AND MARKET DATA TO EVALUATE PPA ECONOMICS

Users can tailor the model to their specific situation by adjusting:

- Renewable resource
- Contract terms
- Wholesale market
- Market price forecast method



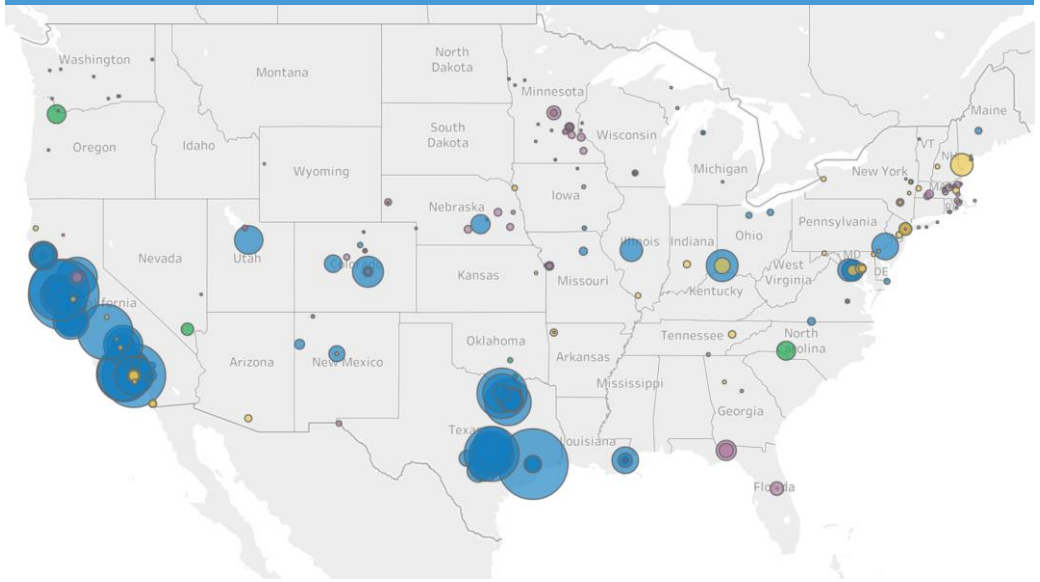
BOTH EXTERNAL AND INTERNALLY-CREATED TOOLS CAN ALSO BE FOUND ON OUR TOOLS & RESOURCES PAGE



TRACKING LOCAL GOVERNMENTS' RENEWABLE ENERGY ACTIONS

THE TRACKER IS AN INTERACTIVE WEB TOOL THAT PRESENTS THE RENEWABLE ENERGY TRANSACTIONS AND ADVOCACY EFFORTS COMPLETED BY U.S. LOCAL GOVERNMENTS

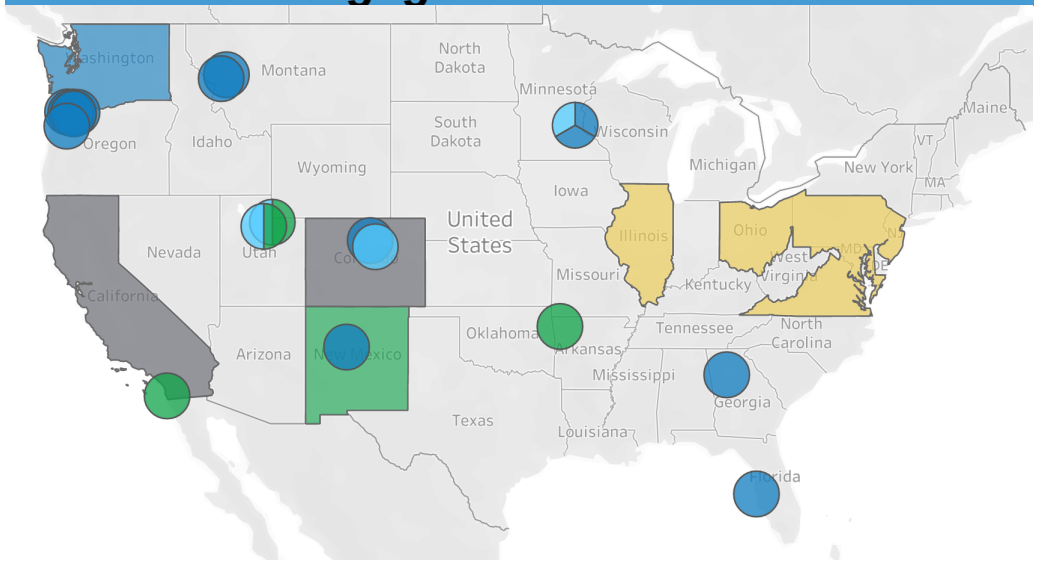
Transaction Tracker



Records renewable energy transactions, including:

- On-site generation
- Off-site physical PPAs
- Off-site virtual PPAs
- Community solar projects
- Green tariffs

Engagement Tracker

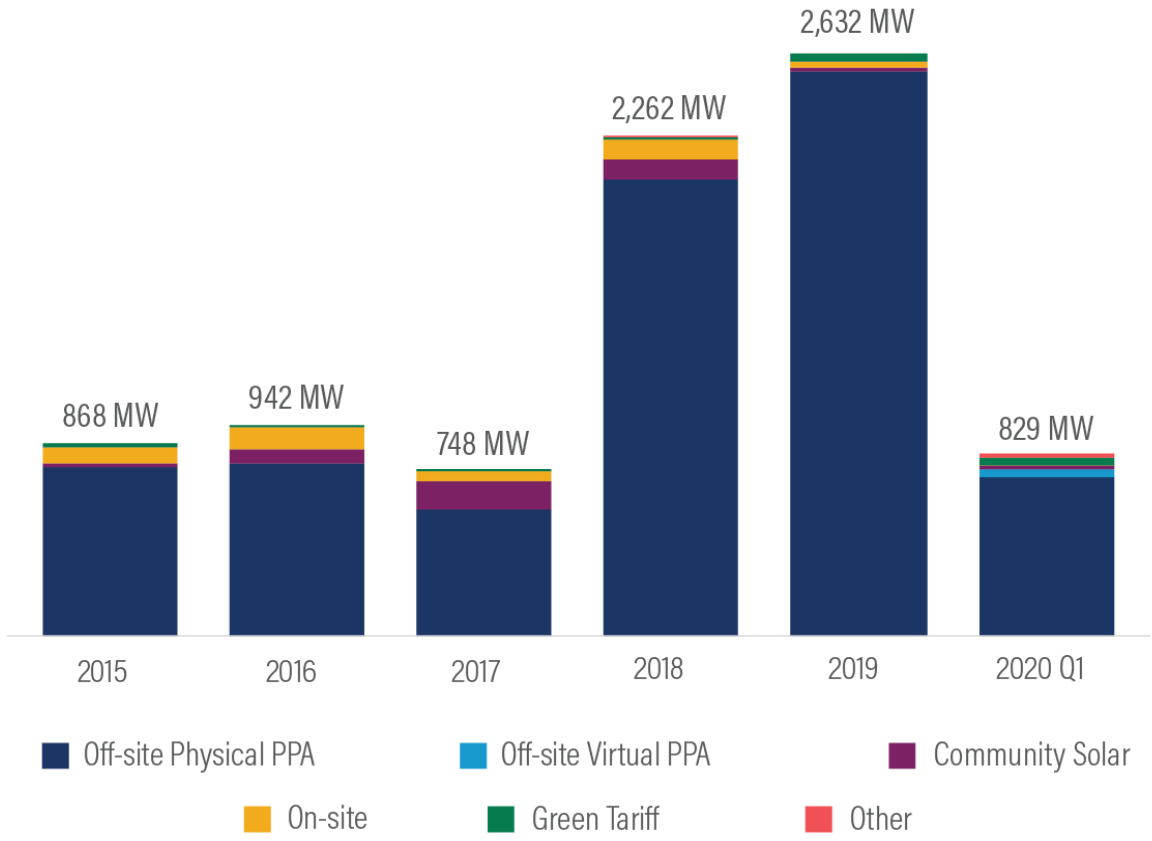


Highlights local governments' engagements with:

- Utilities
- Regulatory bodies (e.g. PUCs)
- Legislators
- RTO/ISOs

LOCAL GOVERNMENT RENEWABLES EFFORTS ARE GROWING

Renewables Transactions by U.S. Local Governments*



335 deals

8.28 GW

Note: * Announcement year (or operation start year if announcement year unavailable)
Source: cityrenewables.org.

20.06.24

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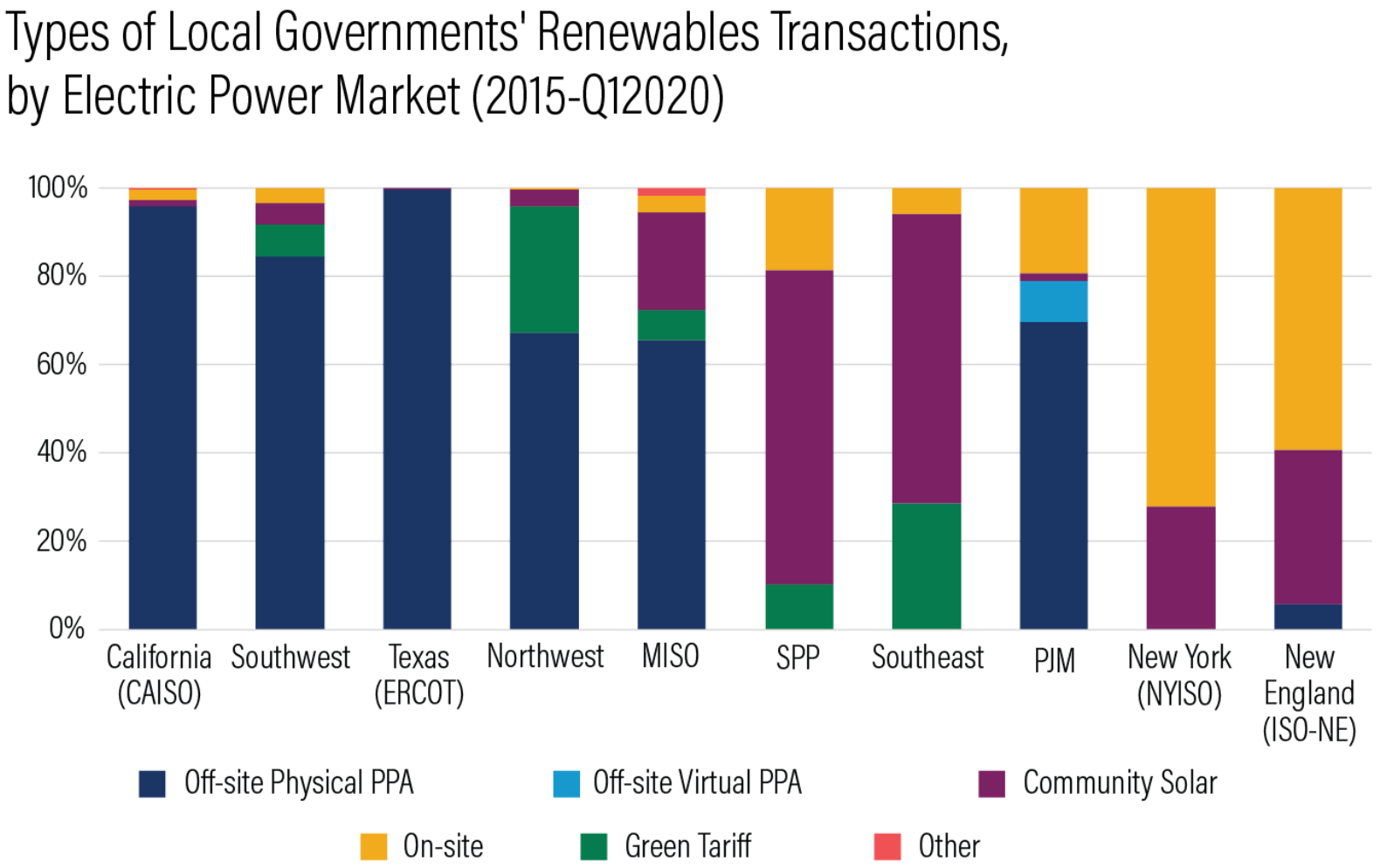
TRANSACTION STRUCTURE POPULARITY VARIES BY REGION



Source: cityrenewables.org.

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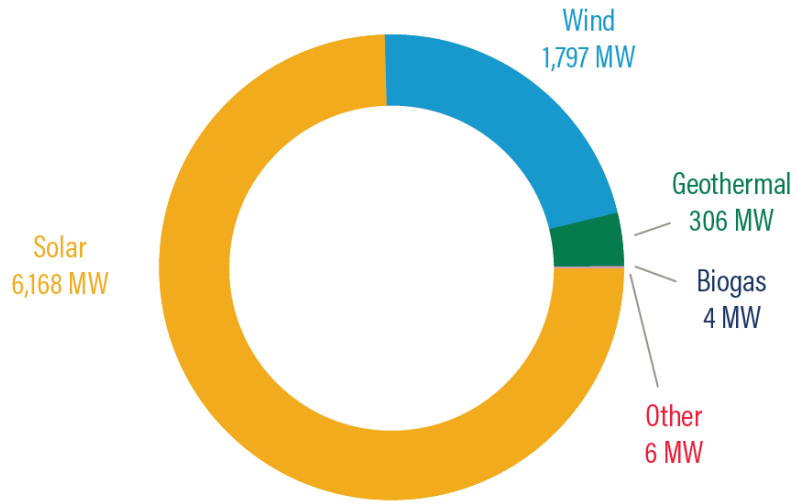
YET SOLAR PV REMAINS THE MOST POPULAR TECHNOLOGY

U.S. Local Governments' Renewables Transactions, by Technology (2015-Q12020)



Source: cityrenewables.org.

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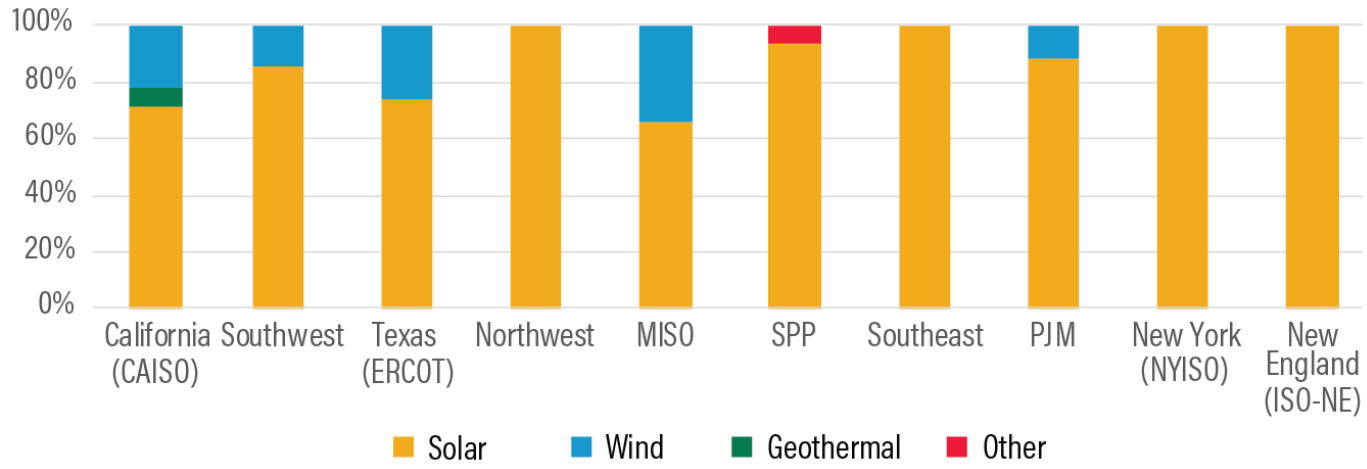
U.S. Local Governments' Renewables Transactions, by Technology and Electric Power Market (2015-Q12020)



Source: cityrenewables.org.

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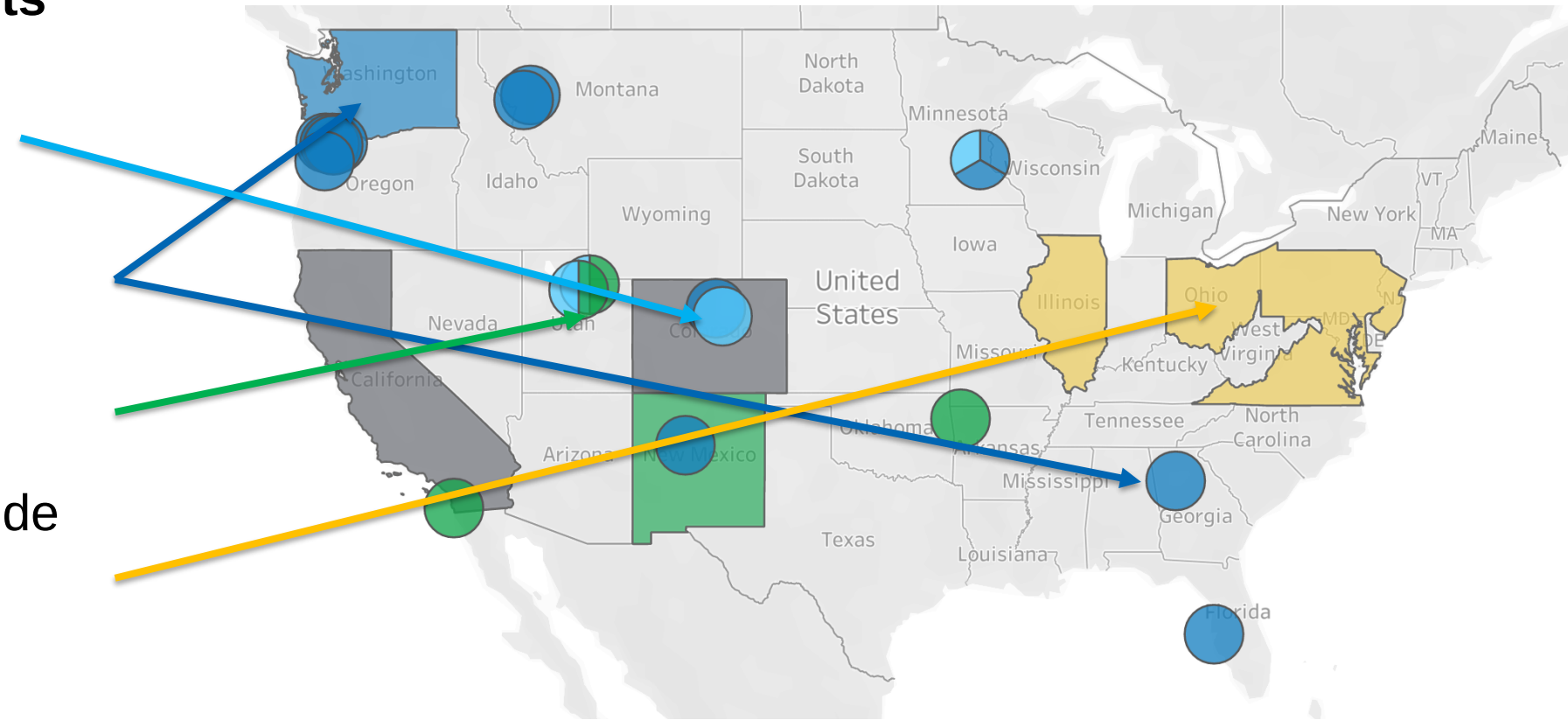
CITIES ARE ENGAGING A VARIETY OF ACTORS TO ACCELERATE RENEWABLE ENERGY DEVELOPMENT

Emerging City Efforts

- Partnering with Utilities
- Engaging in State Regulatory Proceedings
- Influencing Statewide Energy Policy
- Getting Involved in Wholesale Market Design



charlottenc.gov

City of Charlotte
Solar Energy

Renewables Accelerator & EPA Green Power Partnership
Local Government Clean Energy Trends & Resources

LOW CARBON CHARLOTTE

SEAP

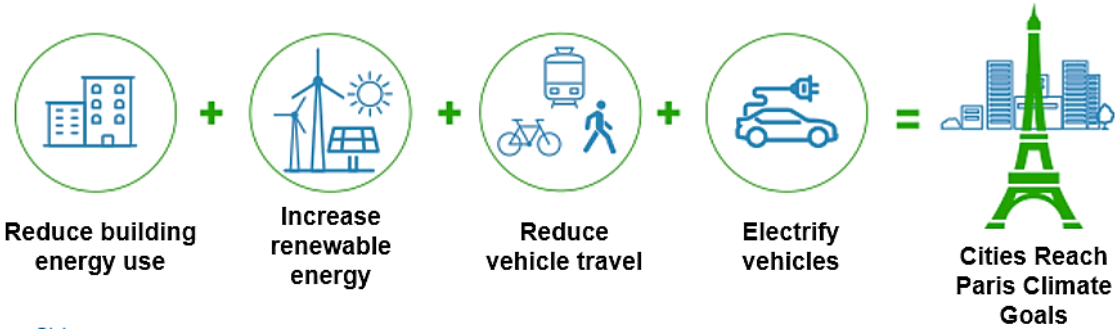
STRATEGIC ENERGY ACTION PLAN

CITY of CHARLOTTE

By 2030, we will **strive to source 100% of City's energy use** in our **buildings and fleet** from **zero carbon** sources.

CLIMATE CHALLENGE & RENEWABLES

American Cities Climate Challenge



WHAT DOES IT COST?

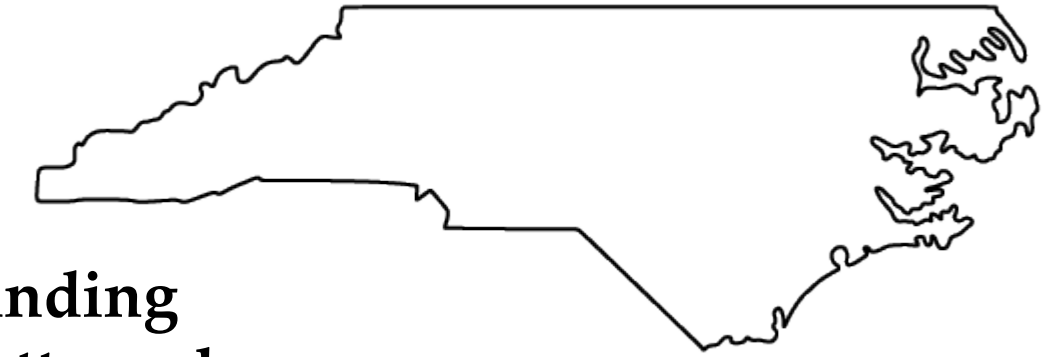
- The term of the GSA Service Agreement is 20 years
  - Years 1-5: ~$350K annual premium
  - Years 6-10: ~$135K annual premium
  - Years 11-15: ~$250K annual savings
  - Years 16-20: ~$625 annual savings

Out-year cost/savings values based on modeled projections

- Projected Cumulative Savings: $**2.0 million** *($415K NPV)*

- *City's current annual electricity spend: $35M*

DUKE MOU AND NC COHORT



Memorandum of Understanding between the City of Charlotte and Duke Energy Carolinas to Establish a Low Carbon, Smart City Collaboration

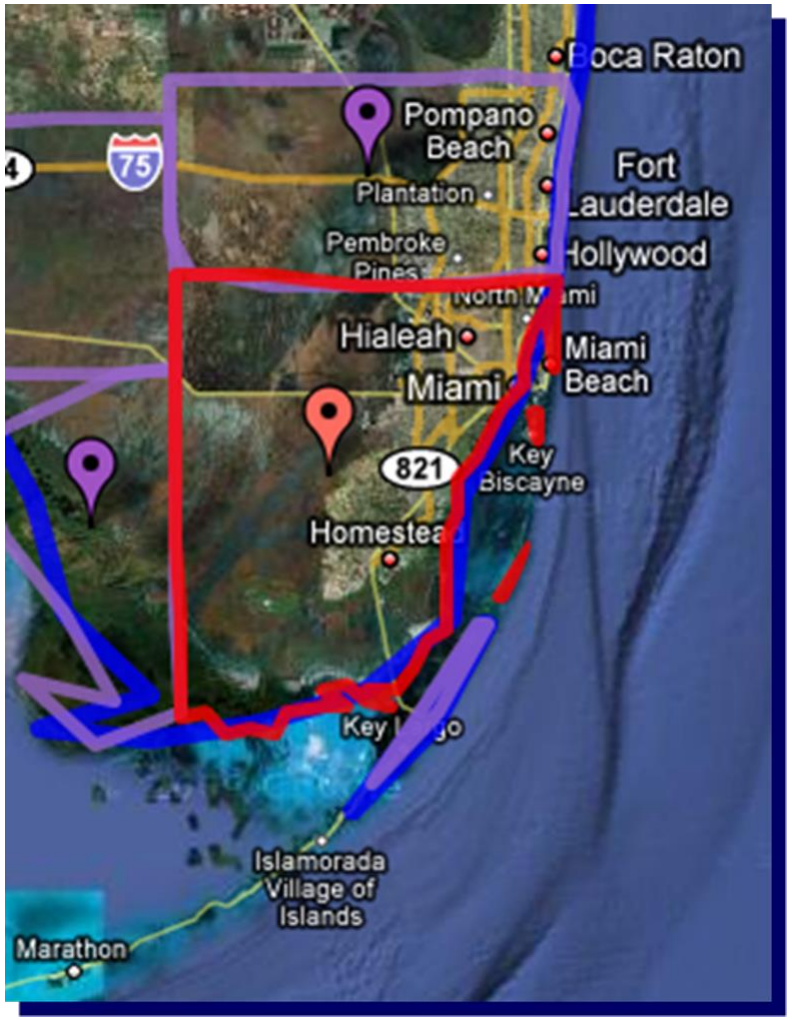
https://charlottenc.gov/sustainability/seap/SEAP/Duke%20MOU.PDF

OFFICE OF RESILIENCE

Regulatory and Economic Resources

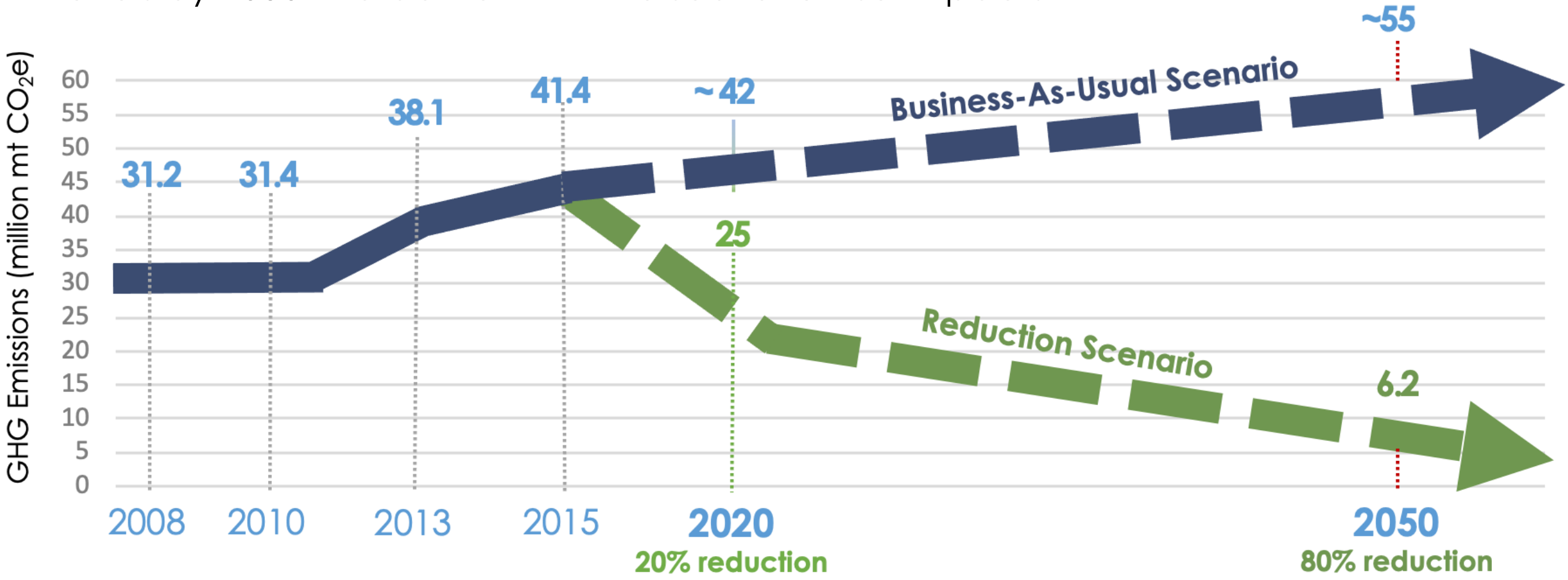
Miami-Dade County

- Total land area covers 2,431 square miles
- 5,830 people per square mile within urban area and 2.5 million people total
- Seagrass to sawgrass ecosystem. Low lying coastal community with porous substrate
- County Government #1 in FPL territory, uses 1.2 billion (1,234,844,938) kWh of electricity per year (2018)
- 37% of community-wide climate pollution (linked to impacts including sea level rise) is related to electricity usage in residential and commercial buildings.

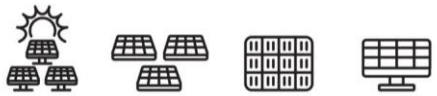


Climate Pollution in Miami-Dade County

- Between 2005 and 2019 - 36 solar-related legislative items put forward by the BCC
- Goal: Reduce greenhouse gas emissions in Miami-Dade County 80% below 2008 levels by 2050 in order to minimize sea level rise impacts



Renewable Energy Implemented Projects



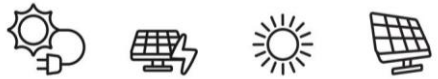
With federal funding installed small PV systems in 3 parks:
15 KW Dr. MLK Jr. Memorial Park
15 KW Westwind Lakes Park
19 KW Country Village Park

Dec 30, 2012

Feb 30, 2013

Solar EPC with Ameresco (RFQ-10) for ISD managed facilities. Ongoing

June 30, 2017



Solar Feasibility Study of Miami-Dade County buildings (R-303-17). Phase 1 analysis, 543 County facilities examined and 238 County facilities were determined to have suitable roof areas. Completed with technical assistance from NREL.

Oct 23, 2018

Miami-Dade County is one of 300 SolSmart communities nationwide, having received SolSmart Gold-level designation.

Jan17,2020

Floating Solar Pilot Project at Miami International Airport with FPL, part of Join Participation Agreement. And No. R-611-19 report pending.

January 28,2020

Renewables Accelerator On-site Solar Cohort. Solicitation being completed. 2019-2020.

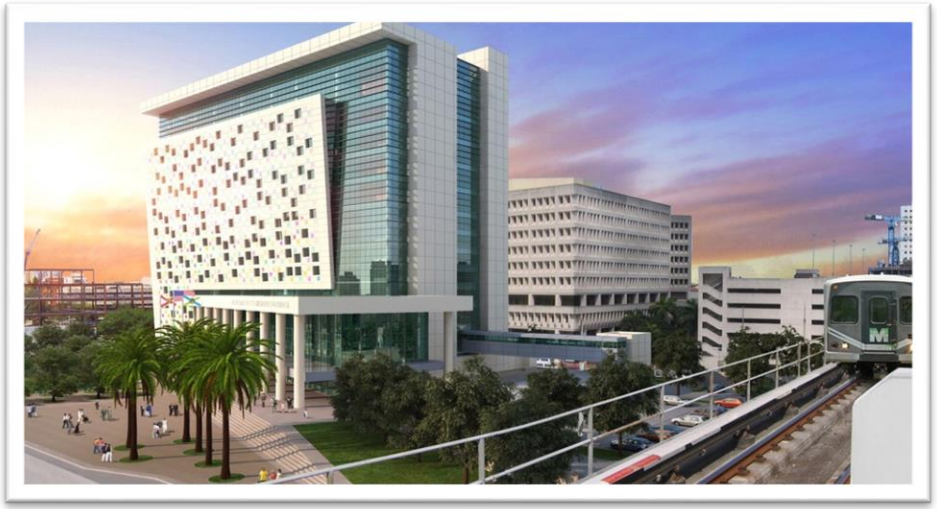
Fall 2020

Renewables Accelerator On-site Cohort

- Help us prioritize the list of 238 sites with suitable roof areas identified in Phase 1 study. 30 sites being considered for the solicitation.
- Expand scope to specific ground mounted systems not identified in Phase 1 analysis.
- Frequent check-ins pushed us to make progress on tasks.
- Provided tools and analytical assistance to run sizing, prioritization and economic analysis.
- Connected to peers pursuing similar projects, validation of data and analysis, etc.
- Convening allowed us to work with procurement staff and provided time to work on solicitation…

Site Details					Solar PV Details			Site Details	
			Electric Load	Electric Rate		Estimated PV Size		Roof	
Department	Name	Address	kWh/year	Rate Schedule	PV Type	kW-DC	kWh/year	Roof Age as of 6/2020	Est Years to Replacement
Seaport	1751 N. Cruise Blvd	1751 N. Cruise Blvd	4,464,000	62 or GSLD1	Rooftop	2,096	3,010,412		
Seaport	1265 N. Cruise Blvd	1265 N. Cruise Blvd	2,812,080	62 or GSLD1	Rooftop	1,125	1,585,642		
Correction	MetroWest Correction Center	13850 NW 41st St, Doral, FL 33	8,061,000		Rooftop	1,025	1,444,080	New	>20
ISD	Elections Headquarters	2700 NW 87 Avenue	2,327,760	170 or HLFT1	Rooftop	958	1,375,774	15 years	?
Seaport	1509 N. Cruise Blvd.	1509 N. Cruise Blvd.	1,349,400	72 or GSD1	Rooftop	939	1,349,400		

Thank you!



Patricia Gómez, PE, CEM, GBE, LEED AP
Resilience/Energy Program Manager
Miami-Dade County Office of Resilience
Department of Regulatory and Economic Resources
E-mail: gomezp@miamidade.gov

QUESTIONS?