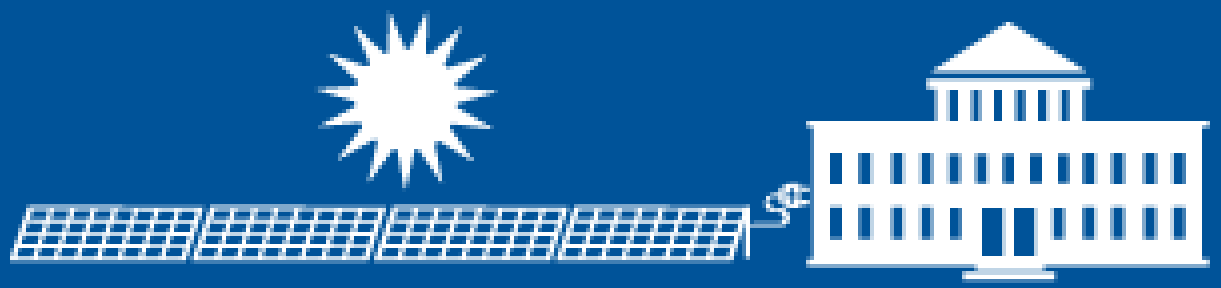
Minnesota Renewable Energy Procurement Workshop: On-site Solar for Municipal Operations

Relevant associated programs

September 18, 2019



U.S. EPA Green Power Partnership

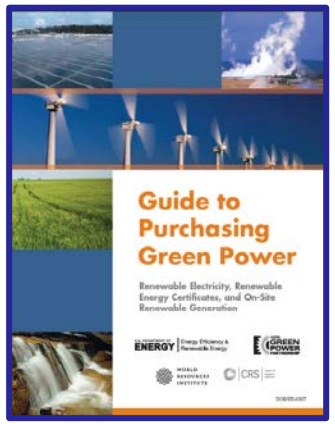
- Summary
  - The U.S. EPA's Green Power Partnership is a **voluntary** program that encourages organizations to use green power.
- Objectives
  - Reduce U.S. greenhouse gas emissions
  - Expand the voluntary green power market
  - Standardize green power procurement as part of best practice environmental management
- Program Activities
  - Provide technical assistance and tools on procuring green power
  - Provide recognition platform for organizations using green power in the hope that others follow their lead

+1,500 Partners are purchasing >60 billion kWh annually

https://www.epa.gov/greenpower

Helping Leverage Organization's Green Power Use

- **Credible Benchmarks & GHG Quantification**
  - Metrics for "How much green power is enough?"
  - Definition of eligible renewables & products
  - GHG reduction guidance and calculations
- **Planning & Implementation Resources**
  - Purchasing strategy guidance
  - Marketing and communications support
- **Recognition**
  - Top Partner Lists
  - Use of the Partner mark
  - Green Power Leadership Awards
  - Promotional opportunities
- **Best Practices & Innovation**
  - Collaborative solar procurement
  - New contract mechanisms



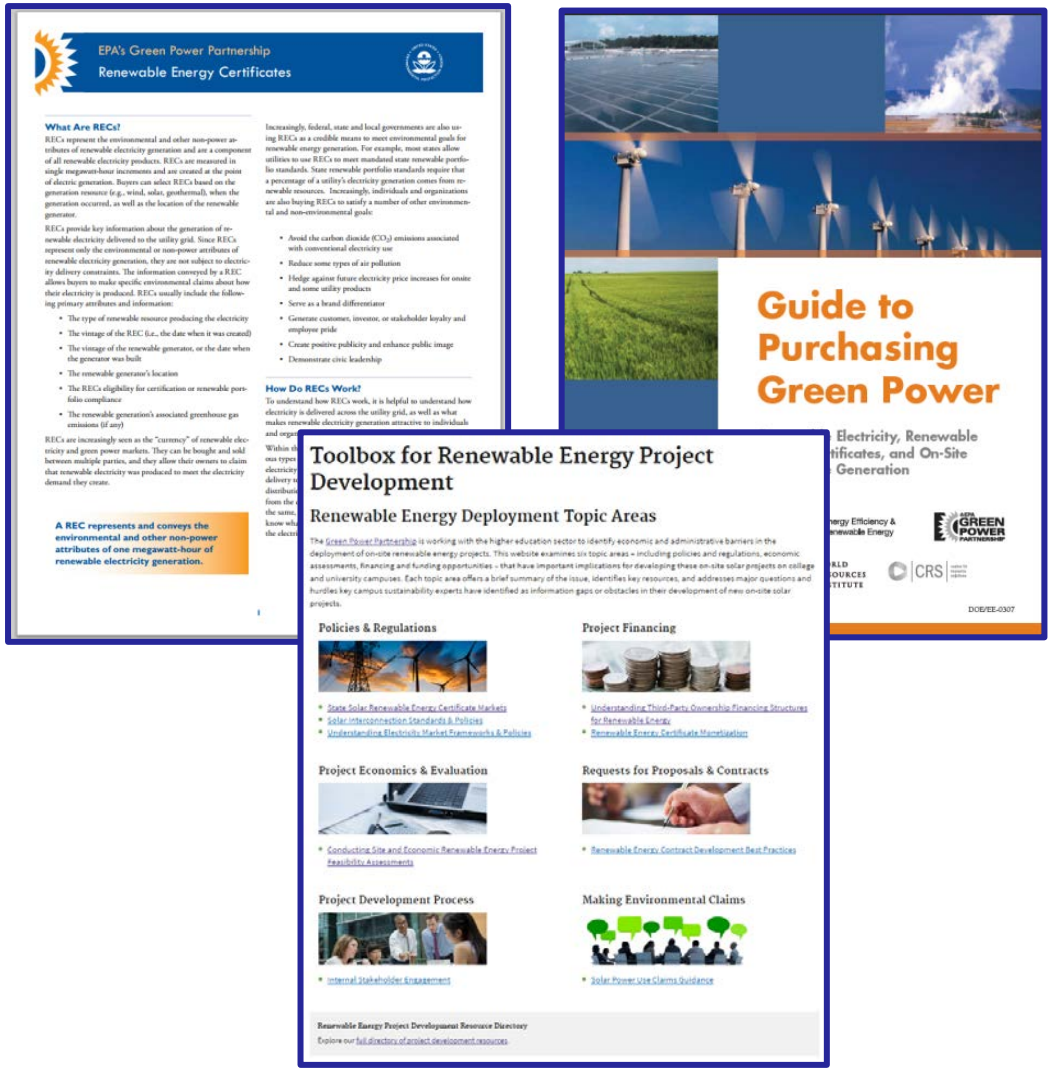
Partner Name	Annual Green Power Usage (kWh)	GP % of Total Electricity Use*	Organization Type	Providers (listed in descending order by kWh supplied to Partner)	Green Power Resources
1. Intel Corporation	3,419,967,843	100%	Technology & Telecom	Renewable Choice Energy[a], 3Degrees[a], On-site Generation, PNM	Biomass, Geothermal, Small-hydro, Solar, Wind
2. Microsoft Corporation	2,699,210,000	100%	Technology & Telecom	Sterling Planet[a], Renewable Choice Energy[a], Enbridge LLC[a], On-site Generation	Biogas, Biomass, Solar, Wind
3. Kohl's Department Stores	1,430,381,349	109%	Retail	3Degrees[a], Carbon Solutions Group[a], Renewable Choice Energy[a], On-site Generation	Solar, Wind
4. Cisco Systems, Inc.	1,085,086,742	97%	Technology & Telecom	3Degrees[a], Sterling Planet[a], Austin Energy[a], On-site Generation	Solar, Wind
5. Google Inc.	1,061,619,944	36%	Technology & Telecom	NextEra Energy Resources[a], Grand River Dam	Biogas, Solar, Wind

EPA GREEN POWER PARTNER

Program Resources for Procuring Green Power

The Partnership Offers:

- Toolbox for Renewable Energy Development
- Guide to Purchasing Green Power
- Resource Library featuring example contracts and solicitations
- Webinars showcasing best practices
- Issue whitepapers



Toolbox for Renewable Energy Project Development

Policies & Regulations

- State Solar Renewable Energy Certificate Markets
- Solar Interconnection Standards & Policies
- Understanding Electricity Market Frameworks & Policies

Project Financing

- Understanding Third-Party Ownership Financing Structures for Renewable Energy
- Renewable Energy Certificate Monetization

Project Economics & Evaluation

- Conducting Site and Economic Renewable Energy Project Feasibility Assessments

Requests for Proposals & Contracts

- Renewable Energy Contract Development Best Practices

Project Development Process

- Internal Stakeholder Engagement

Making Environmental Claims

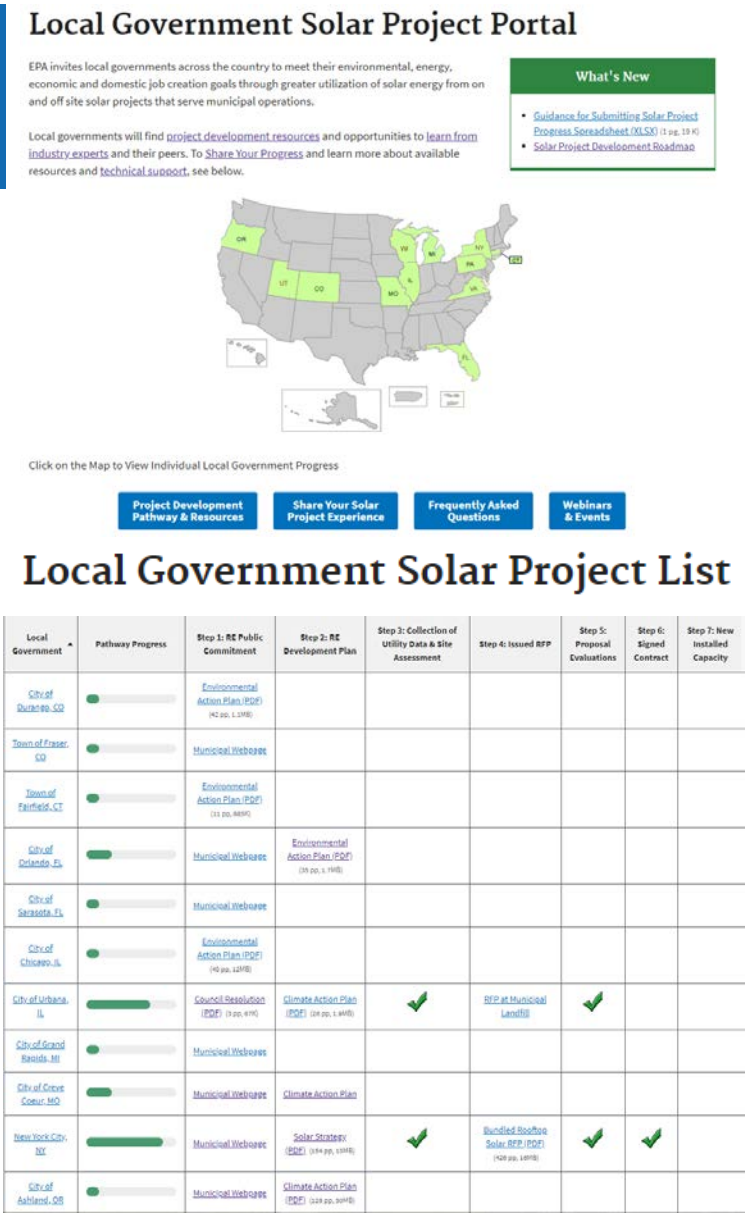
- Solar Power Use Claims Guidance

Title	Author	Content Type	Topic	Sub-Topic	Energy Source
Council of Independent Colleges in Virginia: Request for Proposals for Solar Photovoltaic Projects (More Info)	Council of Independent Colleges in Virginia	Example	RFPs & Contracts, Project Financing Options	Contract Best Practices	Solar
Solar RFP Issuance Checklist for Facilities Managers (More Info)	EPA	Tools & Resources	RFPs & Contracts, Project Development Process, Project Economics & Evaluation	Contract Best Practices	Solar
Solar Proposal Response Checklist (More Info)	EPA	Tools & Resources	RFPs & Contracts, Project Development Process, Project Economics & Evaluation	Contract Best Practices	Solar
CICV Solar Roadmap (More Info)	Council of Independent Colleges in Virginia	Template	RFPs & Contracts	Contract Best Practices	Solar
CICV Collaborative Procurement RFP (More Info)	Tyler Espinoza, Optony Inc.	Presentation	RFPs & Contracts	Contract Best Practices	Solar
George Mason University RFP for Renewable Energy Certificates (More Info)	George Mason University	Example	RFPs & Contracts	Renewable Energy Certificates (RECs), Contract Best	All

https://www.epa.gov/repowertoolbox/

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

The Full Project Development Pathway

midwest renewable energy association

The Midwest Renewable Energy Association promotes renewable energy, energy efficiency, and sustainable living through education and demonstration.

Together with partners around the Midwest, we work to expand renewable energy adoption through innovative programs, renewable energy training, and educational events.

Program & Initiatives:

- Renewable Energy Training
- The Energy Fair
- Grow Solar
- Wisconsin Solar Tour
- Solar University Network
- Solar on Schools

https://www.midwestrenew.org

www.epa.gov/re-powering

RE-Powering America's Land

Encourages the reuse of formerly contaminated lands, landfills and mine sites for renewable energy development, when such development is aligned with the community's vision for the site.

What we do

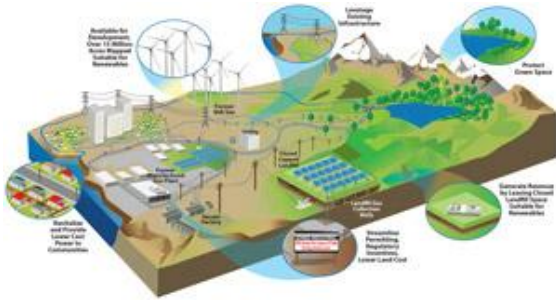
Develop partnerships, create connections and outreach

Disseminate success stories and best practices

Provide technical and programmatic assistance

Articulate benefits: environmental, economic, community

RE-Powering America's Land Initiative:
Renewable Energy on Potentially Contaminated Land, Landfills and Mine Sites



EPA's RE-Powering America's Land Initiative

- encourages renewable energy development on current and formerly contaminated lands, landfills, and mine sites when such development is aligned with the community's vision for the site.

- Identifies the renewable energy potential of these sites
- provides other useful resources for communities, developers, industry, state and local governments or anyone interested in reusing these sites for renewable energy development.

Office of Enterprise Sustainability

Primary Responsibilities:

- Assist Cabinet Level Agencies to develop plans to meet Sustainability Statutory Requirements or Executive Orders
- Share best practices from both inside and outside of government
- Assist agencies finding the subject matter experts to ensure sustainability plans contain all elements required for success
- Assist agencies in finding resources required to execute sustainability plans
- Track the results to provide transparency concerning agency/state progress toward established goals
- Make the entire state sustainability program easier for state agencies so they can be successful

There are six focus areas. Our goals are:

- Greenhouse Gas Emissions: 30% reduction of greenhouse gas emissions by 2025 relative to a 2005 calculated baseline.
- Energy Consumption: 30% reduction in consumption of energy per square foot by 2027 relative to a 2017 adjusted baseline.
- Sustainable Procurement: 25% of total spend on Priority Contracts are sustainable purchases by 2025.
- Reduce Fleet Fossil Fuel Consumption: 30% reduction of State Fleet consumption of fossil fuels by 2027 relative to a 2017 adjusted baseline.
- Reduce Solid Waste: 75% combined recycling and composting rate of Solid Waste by 2030.
- Reduce Water Consumption: 15% reduction of water use by 2025 relative to a 2017 adjusted baseline.

https://mn.gov/admin/government/sustainability/

Solar Master Contract for State & Cooperative Purchase Members

- **Specifies:**
  - Warranties on production and performance
  - Technical efficiencies and quality
  - Construction details and specifications
    - Ex) Type of ground mounting, roof top
    - Pollinator friendly installations
    - National electric code standards
    - Institute of Electrical and electronics Engineers (IEEE) standards

- **Solicits**
  - Design and engineering work
  - Installation of modules and balance of system
  - Operation and maintenance
  - Cash buy or financed purchase prices