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Power public buildings with solar energy



Salt Lake City Office of the Mayor

THE IMPORTANCE OF CITY LEADERSHIP

Cities have an opportunity to lead in the clean energy transition by powering their own operations with solar energy. Installing solar arrays on municipal roofs is the most visible way to set an example, but where on-site solar is not feasible, cities can still use off-site solar power to accomplish their goals. Either way, cities that use clean, renewable energy to power their operations serve as important role models for their citizens and other communities and stand to benefit in several ways:

- Each municipal solar project acts as a publicly visible example of the clean energy that solar arrays can provide, right where that energy is needed.
- Using local solar companies to design, install and maintain municipal projects boosts the local solar market, helping it grow and mature in your community.
- Solar projects can make valuable use of existing city property and infrastructure, and ultimately reduce government spending on electricity.
- Your community can achieve its renewable energy goals faster when the city itself participates actively.

IDENTIFYING THE BEST OPPORTUNITIES

Most cities and towns have plenty of buildings and other properties where solar installations can be beneficial. To name just a few:

- [Public school buildings](#) can be excellent solar opportunities, as both significant power users and centers for learning. Schools often boast large, flat roofs perfect for solar panels, and stand to benefit from energy savings. Solar projects can double as environmental education opportunities in the classroom.
- Closed landfills and other properties with limited uses, such as former industrial sites and vacant lots, can often house large-scale solar projects. Providing clean energy for your city is often the best possible use for these sites, which otherwise might remain empty eyesores.
- Cities often manage facilities that require a steady energy supply around the clock. Wastewater treatment facilities, for example, can benefit from on-site solar systems that both lighten their environmental footprint and add a layer of reliability, especially when paired with on-site storage.
- City-owned parking lots and garages get lots of sun exposure, and can be great places for solar carports or rooftop systems that double as shade for parked vehicles.
- Any city-owned rooftop with enough space and sun exposure should be considered as a potential solar site. The more visible the building is to the public, the better it can serve as a demonstration in addition to a clean power provider. City hall, police and fire stations and public libraries are great places to start.

HOW TO GET STARTED

Once you have assessed your options and are ready to move forward with one or more solar projects, keep the following in mind:

- Each potential site will offer unique benefits and energy-producing potential. Be sure to weigh the pros and cons of each before making a final decision.
- Consider using a local solar installer, and shop around for the best proposal.
- Share your plans with the public. Press conferences or ribbon-cutting ceremonies keep your community involved and build support for future energy initiatives.
- Take advantage of the announcement of a new municipal project to make a public commitment to continue going solar. You could aim to power all of the city's schools with solar energy, power some percentage of city buildings with solar or make plans to install solar on a certain set of city properties. Whatever the goal, it will ensure that each project ties into a broader vision.



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Solar installation at Los Angeles City Hall

CASE STUDIES

Hundreds of cities across the country are enjoying the benefits of their solar projects every day. Here are a few examples of successful municipal projects that you can use to inform your city's plans:

- **Santa Fe, NM:** The city of Santa Fe has installed enough renewable energy on city facilities to provide 25 percent of its electricity needs, including over 4.6 MW of solar energy. You can find [solar installations](#) on community and convention centers, fire stations, the city's wastewater treatment plant and compost facility, among others.
- **Worcester, MA:** During the summer of 2017, the city of Worcester, Massachusetts, opened the largest municipally owned solar farm in New England at the time, on top of a former landfill. The [8.1-megawatt, 28,600-panel](#) solar farm is expected to pay for itself in six years and save the city \$60 million over the 30 years it is expected to operate.
- **Park City, UT:** [Park City, Utah](#), is committed to powering city operations with 100 percent renewable electricity by 2022, and has installed solar panels on a wide variety of city buildings in order to achieve that goal. Panels on transit buildings, police stations, affordable housing units, park buildings and city hall are all part of the mix. The city used a number of funding sources to make these projects a reality, and shares that information with the public online along with real-time monitoring of energy production.

RESOURCES

- Learn more about the solar projects in [Santa Fe](#), [Worcester](#) and [Park City](#).
- The National Renewable Energy Lab (NREL) offers a variety of [resources and trainings for local governments](#) planning solar projects, including on selecting, planning and financing projects.
- The EPA's [Local Government Solar Project Portal](#) offers similar project development resources and examples of local government progress.
- NREL's [REopt](#) model can recommend an optimal mix of renewable energy for buildings or communities to meet cost savings and energy goals.
- NREL's [System Advisor Model \(SAM\)](#) can make cost and performance projections for a specific project.
- Google's [Project Sunroof](#) can provide an estimate of rooftop solar potential for a site or community, and is a user-friendly tool for comparing locations.
- [EnergySage](#) can help you compare local solar installers, quotes, and financing opportunities.