



# Clean energy solutions



Understanding **community solar**,  
**distributed generation**, and **microgrids**





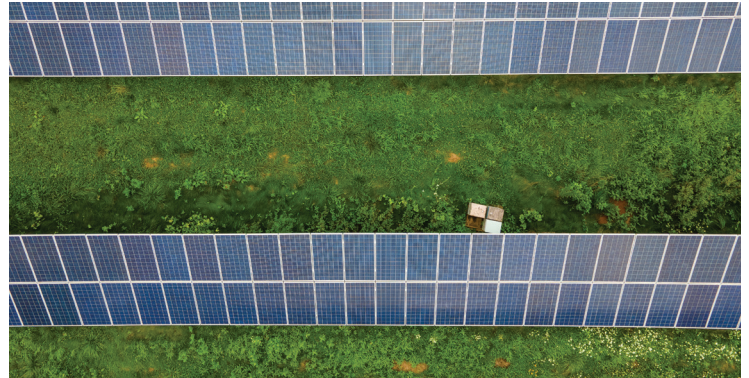


# Community solar

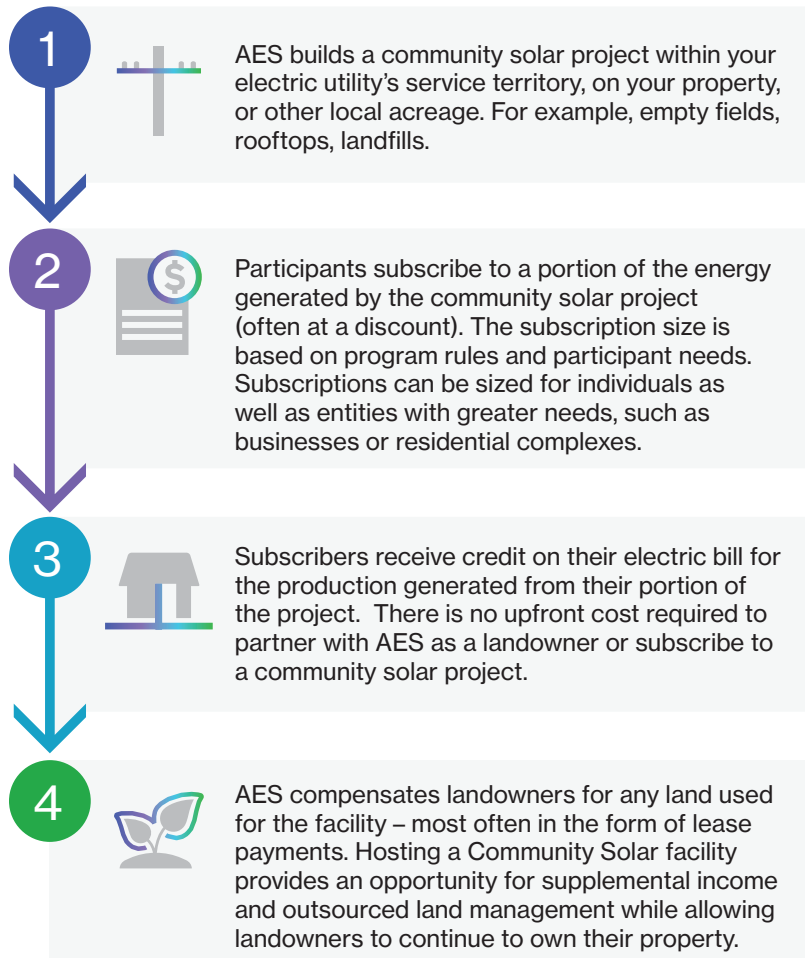
## What is it?

Community solar is an off-site solar facility, from which clean energy's benefits and cost savings flow to a range of nearby customers, including residential utility customers, businesses, municipalities, nonprofits, and others within a community via subscriptions.

Community solar is an equity-driven initiative that removes the barriers to entry, allowing anyone within a participating utility service territory to realize the benefits of clean energy.



## How does it work?





# Distributed generation

## What is it?

Distributed Generation (DG) is an on-site generation facility (solar in this case) from which the benefits of clean energy flow directly to a single consumer, such as a business, municipality, nonprofit, or other organizations within a community. These facilities also have the option of including to be paired with a Battery Energy Storage System (BESS).

The key difference between Community Solar and Distributed Generation lies in their structure. Community Solar serves a wide range of subscribers who share the energy output, while Distributed Generation is designed for a single user, providing energy directly to that customer.



## How does it work?



1



AES builds a distributed generation solar project in your community's electric utility service territory, on your property (empty fields, rooftops, landfills, etc.).

2



The property owner is then the main, and in some cases sole, consumer of the electricity generated from the facility.

3



No upfront cost is required to partner with AES as a landowner and compensation methods are specific to each customer's land agreement.



# Microgrids

## What is it?

A microgrid is an on-site solar & Battery Energy Storage System (BESS) facility from which the benefits of clean energy flow directly to a single customer, such as a business, municipality, nonprofit, or other groups within a community.

All Microgrids include a BESS component to increase flexibility along with reliability and resilience by providing customers with backup power in the event of grid outages.



## How does it work?

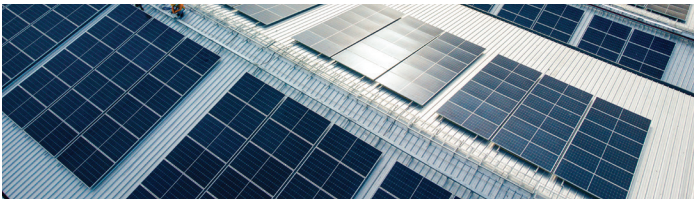


Microgrids are built and operate similarly to Distributed Generation projects. The key difference between a standard Distributed Generation project and a Microgrid is the ability to operate independently from the utility electric system. Microgrids do this by disconnecting the generating facility from the utility network, creating an “off-grid” facility that can continue to generate electricity and power your needs. Microgrids can restore power more rapidly via a process called “black starting” where energy demand is re-energized without the support of the utility grid.

The added benefits of BESS and its resiliency capabilities make it a great option for locations where electric supply is frequently interrupted, or for customers with power-sensitive needs.



# Solar is catching on in more places than you may think



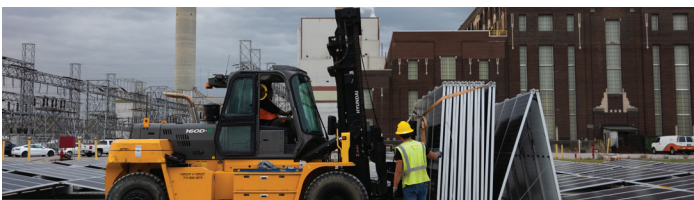
## Rooftops

- Community Solar, Distributed Generation and Microgrids have the ability to be placed on rooftop structures. This is a great way to put typically unused square footage to use while generating additional revenue and/or reducing electricity bills.
- Not all structures are suitable for rooftop solar. AES can help you navigate rooftop building constraints, create a flexible project design and construction timeline that minimizes day-to-day interference, and ensure that indoor operations can continue.



## Landfills

- Municipalities may be able to generate revenue and provide cleaner energy options to their communities by building on top of landfills. Previous financial burdens can now be a source of cleaner energy while also acting as a local revenue and tax generator.
- AES works with industry experts to mitigate risk prior to development. Safety is always our top priority for people, communities, contractors, and the environment.
- AES conducts numerous studies to ensure that the landfill can support the solar system and takes pride in engineering designs that keep the surrounding communities safe.



## Abandoned Structures

- AES can review abandoned facilities such as amusement parks, malls, shopping centers, etc. as potential generation project hosts. This brings local clean energy and all the associated benefits to landowners and communities while increasing curb appeal and cleaning up abandoned sites.



## Carports

- Depending on site-specific conditions, AES may be able to support the building of covered car parks with solar on top. This provides a non-traditional dual use that allows for solar in typically avoided areas, while providing additional comfort to commuters in the community.
- Carports can help businesses monetize space that is typically underutilized. EV charging can easily be added to help businesses develop new sources of revenue.



## Agrivoltaics

- Solar and agriculture can co-exist productively. Combining solar with farming operations while ensuring agricultural traditions are maintained is one of AES' top priorities. Agrivoltaics and dual-use projects include crop production, livestock husbandry, sheep grazing, pig farming, etc.
- The agrivoltaics strategy for a project is a collaborative effort with community members. Landowners, local farmers, local universities, or independent third-party companies are just some of the potential dual-use collaborators. The partnership structure is flexible, and AES works with each individual landowner to find the best solution based on their needs.



## Unlock the Benefits of community solar, distributed generation, and microgrids

- Provides low-cost, locally generated clean energy
- Provides an opportunity for increased self-reliance and energy resilience compared to traditional utility grid usage
- Subscribers (landowners included) have the potential to save on electricity costs
- Creates new, beneficial use for sites no longer generating income. For example, retired landfills, rooftops, or retiring/retired generation facilities
- Potential to generate new tax benefits depending on the system and customer profile
- Creates local jobs and can provide additional local tax revenue
- Depending on the system type, can enhance resilience by providing power during outages
- Creates potential upgrades to local energy infrastructure, enabling increased reliability and growth potential
- Contributes to achieving state, local and corporate clean energy sustainability and decarbonization goals
- Additional benefits to the local environment. For example, increased and improved pollinator habitats, as well as opportunities for animal grazing and agricultural production

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