Case Study: Turning Brownfields into Brightfields at Iowa's Grinnell Solar Park

GREAT PLAINS INSTITUTE

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Across the US, there are sites that often become a burden to communities due to their legacy of contamination. These brownfields, once bustling with workers and machinery, have become too risky in the public eye for new development and are left to sit empty and become overgrown.

Some communities are finding a new solution to change this narrative: turning brownfields into brightfields. One such transformation recently took place in Grinnell, Iowa. For decades, the site that now hosts the Grinnell Solar Park sat vacant—tied up in liens, burdened by a history of industrial contamination, and seen by many residents as unusable. Today, through city leadership and a cooperative ownership model, the 32-acre site has been reborn as a 5-megawatt (MW) solar park delivering clean energy and municipal revenue.[1]

With this brightfield development, the city was able to address an eyesore and environmental concern, meet local clean energy goals, and generate revenue for public services, all on the same land.

What are brownfields and brightfields?

Brownfield properties are, as the EPA defines, "where expansion, redevelopment or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant."[2]

When solar arrays or other clean energy technologies are installed on a cleaned-up brownfield, it's referred to as a "brightfield."[3] Brightfields turn longtime liabilities into productive assets, aligning environmental cleanup with renewable energy development and local needs.

By giving these underused lands a second life, a brightfield allows communities to develop local clean energy on land that was once marked by disuse or contamination. Instead of remaining a burden, this land becomes a local source of new possibilities.

Project highlights

- This project turned an environmental liability into a productive community asset.
- Once stigmatized as a contaminated nuisance property, community buy-in was achieved through a partnership between local institutions.
- The project generates 5 MW of clean, local power and is projected to deliver over $3 million net revenue to the City of Grinnell over a 35-year lifespan.[4]
- The city will use lease revenues to support public services, such as emergency medical services and street improvements.
- The solar park plan preserves space for secondary compatible land uses:
  - Community amenities (a small park and lots for future commercial development) are being planned.
  - Native prairie grasses were planted alongside the solar panels to control erosion, improve stormwater quality, and provide pollinator habitat.
  - Grazing is being explored for vegetation management.

[1] City of Grinnell, "6th Avenue Solar," presentation, accessed January 15, 2026.
[2] "From Brownfields to Land Revitalization," US Environmental Protection Agency, accessed January 21, 2026.
[3] "Brightfields," Virginia Department of Environmental Quality, accessed January 21, 2026.
[4] City of Grinnell, "6th Avenue Solar."

Key takeaways

Proactive city leadership was crucial to the success of this brownfield-to-solar development. Grinnell's city officials coordinated complex land transfers and agreements, working across the school district, government sector, and private sector to unify everyone around a shared vision.

The partnership with the local utility, Alliant Energy, through an existing program, was a win-win. Under this model, the community hosts retain land ownership and receive steady lease income, while the utility handles the solar farm's financing, construction, and maintenance.

The partnership allowed Grinnell to pursue a large-scale solar installation without upfront capital or operational risk, while Alliant gained a site to expand renewable energy generation.

Redeveloping a brownfield as a solar brightfield proved to be an ideal adaptive reuse. It turned a formerly unusable tract into a source of clean energy and revenue, aligning with both environmental and economic considerations.

Grinnell's project exemplifies how environmental remediation and renewable energy can go together.

History of the brownfield site

The site that is now the Grinnell Solar Park has a long and checkered history. Decades ago, it housed manufacturing facilities, including a playground equipment maker, the Miracle Recreation Equipment Company, and then RC Industries.[5]

When these industries left, what was left behind was land in a prime location with a significant amount of pollution. By the early 1990s, soil tests revealed hazardous waste, including volatile organic compounds such as benzene, toluene, and xylenes, landing the property on the Iowa Department of Natural Resources (DNR) registry of hazardous waste sites by 1996.[6] The DNR conducted a major cleanup, including the removal of 119 drums of chemical waste and hundreds of cubic yards of contaminated soil.[7] While the most acute remediation was completed in the early 1990s, the damage to the land's reputation was already done.[8]

For years, this plot, located along US Highway 6 on Grinnell's west edge, sat vacant and fenced, a brownfield in every sense. Many locals avoided the area, and potential developers were deterred by the "environmental stigma," a label often attached to former industrial sites.[9]

By the mid-2010s, the conditions began to shift. Environmental tests showed the land had been testing clean in recent years, and DNR and public health officials declared the property safe enough to host a school. Seeing an opportunity, the Grinnell-Newburg School District acquired the 32-acre tract via eminent domain, intending to build new school facilities there. The acquisition was a step that cleared decades of liens and legal entanglements.

However, plans for a school on that site did not move forward due to the long-standing public perception that the site was contaminated. By 2022, the district was willing to sell the cleaned property if a suitable new use could be found.

City pursues brightfield opportunity at brownfield site

When the school district moved its school elsewhere, the city stepped in. Several factors made the plot an attractive candidate for a solar project. It was large, flat, and lay right next to existing roads and utility lines, simplifying interconnection to the electric grid. Moreover, it was already zoned for industrial use (M-1), which allows solar farm permitting by right, eliminating the need to rezone or battle over land-use compatibility.

City Manager Russ Behrens described the biggest challenge as overcoming the perception that the land was unsafe:

"No matter how many tests we ran, people just weren't comfortable with a school on that site. A solar array became a way to make the land productive again, while giving the community enough time to reshape their perception of the property."

Thanks to the school district and DNR's efforts, the worst contamination issues had been remediated, with the site officially approved for reuse.

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[5] Alice Herman, "Grinnell Hosts Conference in Wake of Environmental Success," *The Scarlet & Black*, September 18, 2015.

[6] Iowa Department of Natural Resources, *Site Inspection Narrative Report for Miracle Recreation Equipment (Grinnell, Iowa)* (March 19, 1993), document 27325, available on the "Contaminated Sites" web page for Miracle Recreation.

[7] Iowa Brownfield Redevelopment Program, Iowa Department of Natural Resources, *IDNR Brownfield Program Site-Specific Assessment (SSA): RC Industries Site, 400–432 6th Avenue West, Grinnell, Iowa* (July 2012), document 27360.

[8] Alice Herman, "Grinnell Hosts Conference in Wake of Environmental Success."

[9] "Common Obstacles to Redevelopment," Minnesota Brownfields, accessed January 21, 2026.

Photo credit: Courtesy of the City of Grinnell

Community perspective: From "glowing" land to local pride

For years, the community considered the property an eyesore and "glowing" due to contamination. The redevelopment into a solar park shifted this narrative. Instead of sitting idle, the land now generates revenue and supports community services. That vision crystallized around 2021–2022, when Alliant Energy, the electric utility serving Grinnell, rolled out its Customer-Hosted Renewables program.[10] Grinnell's city leaders immediately saw a chance to solve their brownfield problem.

Developing the solar project through partnerships

Located south of 6th Avenue/US Highway 6 on the city's west side, the City of Grinnell subdivided the restored brownfield site and sold tracts to trusted local partners, each of whom now owns their parcel of land within the unified fenced array and leases it to Alliant.[11] The city's partner selection included some of the most civically engaged institutions in the area: Grinnell College, Mayflower Community, and the Ahrens Park Foundation. Each serves a distinct constituency, but all share a nonprofit, community-oriented character.

The initial lease term for the site is set for 20 years (with the potential for renewal), with Grinnell College and the City of Grinnell each hosting 2 MW of customer solar. Mayflower Community will host a 625-kilowatt (kW) facility, and Ahrens Park Foundation will have a 375-kW facility.[12]

Developed by an Iowa-based engineering firm, the Waldinger Corporation, construction on the site began in 2024.

Through Alliant's Customer-Hosted Renewables program, this model of solar farm allowed community land to host solar arrays in exchange for long-term lease payments, while Alliant finances the project and provides ongoing operations and maintenance.[13] Native grasses and wildflowers were planted throughout the site. These deep-rooted native plants will help absorb and filter stormwater, preventing runoff pollution to local waterways while also creating habitat for pollinators, birds, and other wildlife in an area that was previously a brownfield turf.

[10] "Alliant Energy Customer-Hosted Renewables," Alliant Energy, accessed January 21, 2026.
[11] "Alliant Energy - City of Grinnell," Ideal Energy, accessed January 21, 2026.
[12] "Alliant, Ahrens Park and Three Other Entities Partner on Clean Energy Initiative – Construction Begins on New Solar Park in Western Grinnell," Claude W. & Dolly Ahrens Foundation, April 25, 2024.
[13] "Alliant Energy Customer-Hosted Renewables."

The Grinnell Solar Park marks a major milestone in the city's clean energy journey. Beyond generating renewable power, the site is envisioned as a living educational resource for the community. Alliant Energy plans to use the solar park to study how distributed solar generation interacts with the local electric distribution system, providing valuable insights for future projects across Iowa.[14] The solar park will also serve as an educational tool for Grinnell College students and local residents, offering opportunities to learn firsthand how solar energy works and how it can be integrated into community-scale development.

"This development helps move the college toward its goal to become net-greenhouse gas neutral before 2040, and the city's leadership on this project has hugely benefited our entire community," said Liz Queathem, senior lecturer in biology, who co-chairs Grinnell College's Sustainability Planning Committee with Chris Bair, environmental and safety coordinator. Plans have been discussed to allow livestock to graze the vegetation under the solar panels as a form of natural site maintenance.

Benefits to the city and community

One of the most celebrated benefits of the brightfield project is the lease revenue flowing to project partners, especially the City of Grinnell. Under the lease terms, Alliant will pay the city around $98,600 per year for the 2 MW on city-owned land. The city expects net revenue of over $3 million if the full 35-year term is realized.[15]

City leaders have earmarked this influx of funds for vital needs, such as bolstering ambulance and emergency medical services and improving streets and other public infrastructure. Plans are also underway to use solar revenues to seed microgrants for local businesses to install efficiency upgrades and reduce utility bills.

Currently, the site solely hosts the brightfield project. Secondary compatible community uses are being planned for the portions that have been set aside. At the east end of the property, the city plans to create a green space that connects with Grinnell's recreation trail system, which runs nearby. This area will also enhance watershed management around Arbor Lake, southeast of the site, improving both recreation and environmental resilience. Additionally, the city plans to reserve some prime frontage for commercial business lots.

The long-term plan is that after 35 years, when the solar leases end, the solar equipment will be removed by Alliant at the project's end-of-life, and the city will regain full control of all 32 acres. According to city officials, at that point, the land could become a business park for light industry, leveraging the site's highway access and clean status.

Insights from the project

Grinnell's journey from brownfield to brightfield offers several insights for other communities looking to tackle similar challenges. The very things that make a brownfield daunting—long disuse, existing infrastructure, and a complicated history—can be turned into advantages. Grinnell realized that an idle site with power grid access and no competing uses was prime for solar development once cleaned.

It took bold leadership from the City of Grinnell to push this project forward. The city actively convened partners and pursued a solution that fit their community's needs.

This kind of project often requires local champions and may not emerge from the top down. The city didn't do it all alone. Grinnell's success was catalyzed by aligning local effort with the external support structures.

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[14] Chris Caporale, "Grinnell Solar Park Offers Collaboration on Renewable Energy Progress," *Greater Des Moines Partnership*, accessed January 21, 2026.
[15] City of Grinnell, "6th Avenue Solar."

The City of Grinnell relied on state and federal environmental experts to guide the brownfield remediation and leveraged a utility program to handle solar development, reducing costs and risks.

This type of cooperative structure allows multiple organizations and stakeholders to share risk and reward, unlocking a complex project that can become a community asset with a visible, responsible reuse.

Conclusion

Beyond locally generated clean energy, this solar park on a once heavily stigmatized brownfield will now fund municipal services, enhance public parks, support small businesses, and restore local ecosystems.

Grinnell has demonstrated that even a small city can accomplish big things when it comes to renewable energy and redevelopment. By turning a long-standing brownfield problem into a brightfield solution, the city is lighting the way for other communities in Iowa's clean energy transition.

As the solar panels generate power and revenue, the brightfield at the west end of 6th Avenue will be a shining testament to what collaboration and community spirit can achieve.

This case study was informed by discussions with Russ Behrens at the City of Grinnell, Liz Queathem and Chris Bair from Grinnell College, and Chad Nath at the Ahrens Park Foundation. We thank them for their valuable insights and time.

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