Applying LEED to manufacturing projects

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What are the advantages of using LEED for manufacturing facilities?

LEED-certified manufacturing facilities are the triple bottom line in action, benefiting people, the planet, and profits. LEED certification leads to healthier, more productive places, reduced stress on the environment, impressive savings through reduced utility costs, and enhanced building value. LEED-certified manufacturing facilities are designed and operated to consume less water, less energy, fewer natural resources and are ultimately aimed to reduce the overall impact of the development on the local, regional, and global environment. Factories across the world are using LEED to ensure a more efficient, equitable, and sustainable future.

For manufacturers, efficiency equals a healthy business unit and can save owners and operators millions on an industrial scale. Green buildings also ensure that manufacturers are good stewards for their communities and help protect residents and workers, promoting a healthy environment and economy.

What issues are unique to industrial projects?

Manufacturing and industrial facilities often have different energy and water needs, unique ventilation requirements, high equipment loads, 24/7 operations, and programmatic relationships with other buildings that make pursuing strong efficiency measures challenging. Recognizing the unique challenges that often exist in manufacturing facilities, USGBC has developed industry-specific guidance and certain LEED credits were adapted to reflect the needs of the industrial sector.

How many manufacturing facilities are registered and certified under LEED?

As of June 2025, there are 5,735 LEED-certified and registered industrial manufacturing facilities representing 1.69 billion square feet (157 million square meters) of built space across the globe. These numbers do not include light industrial or warehouse and distribution projects. See the LEED for warehouse and distribution center projects help content to learn more about these facility types.

How do manufacturing facilities earn LEED certification?

Manufacturing facilities can be certified under different LEED rating systems at different stages of the building's lifecycle.

- **LEED for Building Design and Construction (BD+C)**: New Construction and Major Renovation is the most appropriate rating type for buildings that are new construction or major renovation. At least 60% of the project's gross floor area must be complete by the time of certification and must include the entire building's gross floor area in the project. For manufacturing spaces, this may include areas dedicated to administrative, warehouse and distribution (if less than 60% of the total GFA), and production-related functions.
- **LEED for Operations and Maintenance (O+M)**: Existing Buildings can be applied to existing buildings that are fully operational and occupied for at least one year. The project may be undergoing improvement work or little to no construction and must include the entire building's gross floor area

How does LEED address the unique challenges of industrial projects?

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LEED v5 is the most current version of the rating system and is available for all commercial projects pursuing certification under New Construction, Core and Shell, Commercial Interiors and Existing Buildings. Many of the strategies developed for the manufacturing or high process load industry under previous versions of LEED, have been adapted for LEED v5 or can be found in the new Project Priorities and Innovation credit category. Credits in this category offer greater flexibility to address unique project contexts and priorities, including typology, culture, location, areas of innovation and individual performance objectives. Sector specific Project Priority credits are continuously being developed and will be released in the Project Priority Library for use.

When developing the LEED v4 and LEED v4.1 rating systems, certain prerequisites and credits were adapted to reflect the specific needs of the industrial segment. Incorporating feedback from our manufacturing stakeholders, LEED has published industry-specific guidance in the form of Alternative Compliance Paths (ACPs), reference guide material, and pilot credits. For example, LI 10493 allows LEED v4 BD+C projects with more than 50% unregulated process loads and following whole building energy simulation approach may use the LEED BD+C Core & Shell energy performance improvement thresholds in lieu of the LEED New Construction thresholds. How to document the input assumptions for receptacle and process loads when conducting an energy model is included in the LEEDv4 BD+C Reference Guide.

LEED BD+C: NC manufacturing projects also have the option of applying the following **LEED BD+C: Warehouses and Distribution Centers** strategies where appropriate:

- Surrounding Density and Diverse Uses
- Electric Vehicles
- Thermal Comfort
- Quality of Views

Contact GBCI prior to applying these strategies to a project to ensure they are the right fit.

How can multiple buildings and structures in a campus setting earn LEED certification?
Manufacturing and industrial facilities often operate on a large scale with multiple buildings spread across a single site. All these buildings, people, and processes are interconnected with each other. To address this, the LEED Campus Guidance was introduced for projects that are on a shared site under the control of a single entity. Its application to manufacturing developments represents the complexity of buildings and infrastructure on a site. LEED Campus Guidance is a useful tool for industrial and manufacturing campuses with multiple buildings, common utilities, and site-wide management policies. By utilizing LEED Campus Guidance, facility owners and project teams can benefit from a streamlined document development and review process, leading to successful implementation of LEED project.

How does the Arc platform relate to manufacturing projects?
The LEED v4.1 O+M Rating System offers a unique performance-based pathway to certify your existing buildings and interior spaces. This new rating system uses Arc, a state-of-the-art platform designed to collect, manage, and benchmark your building across five performance categories: Energy, Water, Waste, Transportation, and Human Experience.

In the manufacturing industry, LEED v4.1 can be used to compare industrial facilities within your company to other similar facilities pursuing high-performance measures from around the world. Facility managers and owners can continuously monitor the data and make informed decisions to optimize the building performance based on real-time data and analytics. This performance pathway can then be used to certify and recertify the project every 3 years. Learn more about LEED v4.1 O+M.

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Some manufacturing and heavy industrial O+M projects can face challenges with process loads (energy, water, and waste) that impact performance scores to the point that prerequisites may not be met. If this is the case, please contact us.

LEED v5 BD+C, ID+C and O+M rating systems allow for all space types to certify utilizing the new Arc experience, which offers fluidity and flexibility for users. All performance, certification and reporting will be delivered in one place.

What are the various LEED resources available for manufacturing projects?
There are many resources available for manufacturing facilities pursuing LEED Certification. Here are a few examples:

Technical Resources:

- LEED Interpretation 10493 allows LEED v4/v4.1 BD+C projects using whole building energy simulation and documenting unregulated energy cost exceeding 50% of the total proposed building energy cost may use the BD+C: Core & Shell energy performance improvement thresholds in lieu of the New Construction thresholds.
- Whole Project Water Use Reduction Pilot Credit allows LEED v4/v4.1 BD+C projects to quantify water use with whole-building water balance modeling, similar to the compliance path for whole-building energy modeling. It also allows projects to include potentially significant water savings that previously went unrecognized, such as process water.
- LEED v4 Energy Update - Projects with a high percentage of unregulated or process loads can continue using C&S threshold and are also encouraged to consider LEED v4.1 credit substitution .

Industry Articles and Reports:

- Unilever Hefei Leverages LEED Zero to make manufacturing sustainable
- LEED in Motion: Industrial Facilities
- Five myths about using LEED for manufacturing facilities (5 series articles)

Where can I find owner profiles and case studies on manufacturing projects?

- Techtronic Tools Vietnam Factory-1
- Mars Lietuva Manufacturing extension
- Core5 Quang Ninh 1 - Factory Village
- MAPAL India Coimbatore Facility
- Intel Ocotillo Campus Case Study
- Method Soap Factory
- Colgate-Palmolive New Jersey facility

One can view additional LEED manufacturing projects in the USGBC Project Directory by searching for the keywords ‘manufacturing’ or ‘industrial’ in the search bar. This will show non-confidential projects with such terms in their project title.

Does USGBC offer any education for project teams wanting to learn more about manufacturing facilities pursuing green building measures?
Yes! Check out the following sessions in the USGBC online course catalog:

- LEED Zero: Lessons Learned from 5 Case Studies
- LEED and Manufacturing Facilities Educational Resources
- Busting Five Myths for LEED and Manufacturing Facilities

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- LEED and Industrial Facilities: Meet four of the top users of LEED [videos]

Who can I contact for more information about this?
For more information about LEED and manufacturing facilities, contact us.