Global Common
"Profitable Solutions for Our Partners and Planet"

Cromwell Data Center

Innovation and Preservation — A Vision for the Future

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Project Highlights

- **Community Power Program:** Global Common will engage a Connecticut-licensed Energy Services Company (ESCO) to provide electric supply for all participating Cromwell residents at no cost, potentially reducing households' total electric bills by nearly 50%.
- **Substantial Municipal Revenue:** More than $10 million in municipal revenue annually at full development under a negotiated Host Community Agreement, nearly 20% of Cromwell's FY2025 property tax levy.
- **Clean, Efficient Onsite Power:** High-efficiency fuel cells with waste-heat recovery, minimizing dependence on the electric grid, with opportunities for commercial CO_2 recovery.
- **Farmland and Open Space Preservation:** More than 70% of the 159-acre site would remain undeveloped, including approximately 20 acres in front of the parcel to be dedicated for permanent farmland and open-space preservation. (See photo below.)
- **Neighborhood Protection:** Buildings and equipment concentrated toward the rear of the property, with substantial setbacks, landscaped berms, sound barriers and natural buffers.
- **Minimal Environmental Impacts:** Avoids wetlands, minimal noise meeting applicable standards, minimal water consumption with closed-loop cooling.
- **Regional Technology Hub.** Project can help establish Cromwell as a regional center for advanced technology while preserving the town's suburban character and open space.
- **Alternative Uses.** If the data center does not proceed, the property could be developed for other permitted commercial or industrial uses that could have greater environmental and neighborhood impacts, and fewer community benefits.

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Background

The Geer Street area of Cromwell has a long agricultural history. Geer Street itself originated as a farm lane, and the Gardner property has been used for farming and nursery operations for many years. Over time, residential neighborhoods, schools and other development have grown around the remaining agricultural properties.

Although farming has continued, portions of the Gardner property have been zoned for industrial development for decades. In 2021–2022, a developer proposed a warehouse and distribution facility with a footprint exceeding one million square feet on the Gardner property. The proposal generated considerable public discussion about traffic, wetlands and impacts on surrounding neighborhoods, and the developer ultimately withdrew its application.

Global Common is now proposing a different approach: a technology campus combining advanced computing, highly efficient onsite power generation and substantial preservation of farmland and open space.

Global Common's objective is to enable economic development while protecting the surrounding community and preserving much of the property's agricultural character. However, a debate has emerged over whether the site should be developed as a data center, or whether some alternative use should be adopted.

Vision and Strategy

Innovation and preservation are both worthy but sometimes competing goals. Global Common's vision is designed to combine their inherent strengths to create greater economic, environmental and community benefits than either could achieve alone.

Among the proposed community benefits, Global Common is developing a Community Power Program designed to eliminate electricity supply charges for all residential customers in the Town of Cromwell, as the project expands to full build out. The program would reduce residential electric bills by nearly 50% when fully implemented. (See the accompanying article.)

The project could also generate more than $10 million per year in municipal revenue under a negotiated Host Community Agreement, by far more than any other taxpayer and nearly 20% of the town's reported property tax levy for FY 2025. The payment amount would be subject to negotiations with Cromwell.

The Cromwell project will incorporate "Data Center Best Practices" to accomplish these objectives. These Best Practices will supplement numerous federal, state and local laws and regulations governing design and operation of data centers and related equipment.

Data centers provide essential computing and communications infrastructure supporting healthcare, transportation, banking, education, scientific research, business, government and artificial intelligence. Cromwell's existing energy infrastructure, strategic location, access to major markets and a skilled workforce make it uniquely suited for this development. By integrating advanced computing, efficient onsite energy generation and thoughtful land-use planning, the project can help position Cromwell as a regional center for advanced technology while preserving the town's suburban character and open space.

Site Layout and Open Space

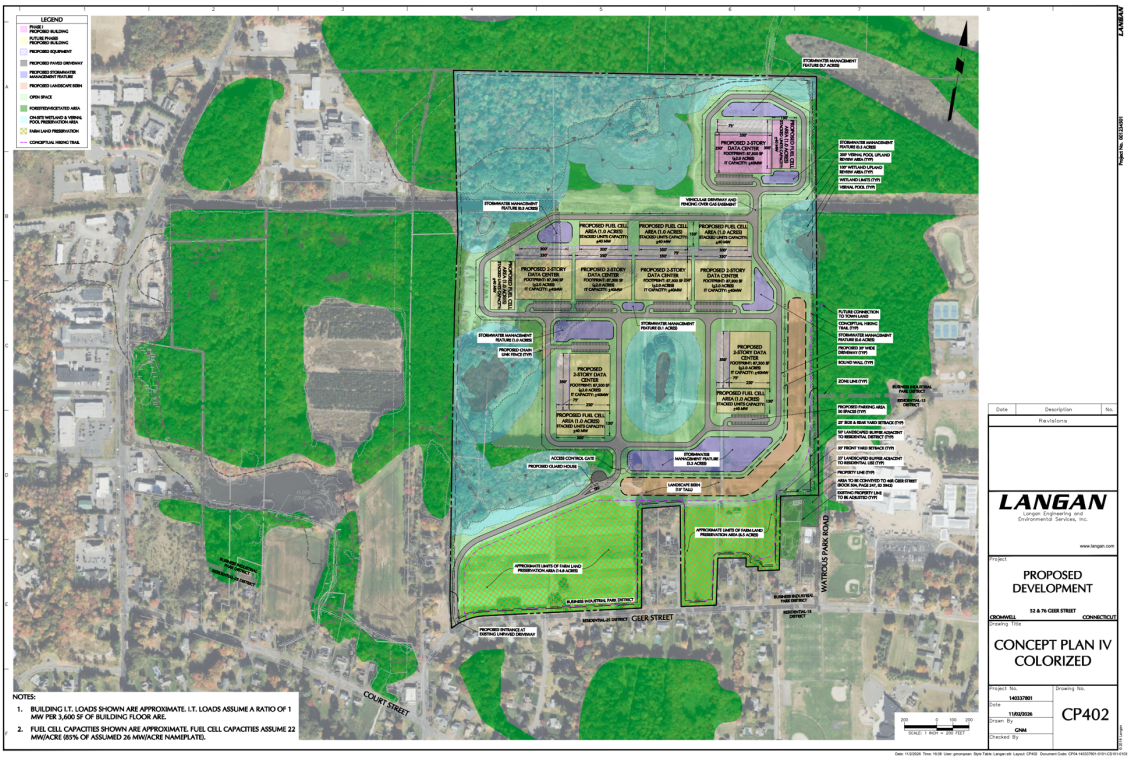
The site design will leave more than 70% of the approximately 159-acre property undeveloped, including preserved farmland, wetlands and buffer areas, wooded areas and natural buffers. The total building footprint would be less than 15 acres, or less than 10% of the total site area.

The project intends to permanently dedicate approximately 20 acres of open space in the front of the parcel along Geer Street to the CT Farmland Preservation Program, or a similar permanent open space dedication, removing commercially zoned land from future development. This would require Global Common to negotiate the termination of existing solar development rights on portions of the property, at substantial cost to the project. The solar project would likely proceed on approximately 15 acres of frontage on Geer Street unless Global Common provides compensation to terminate these rights.



Portion of 20 Acre Permanently Preserved Farmland in Front of Parcel on Geer Street

Most buildings and equipment will be concentrated towards the rear of the parcel. The closest equipment would be over 1200 feet (more than three football fields) from Geer Street, and over 600 feet from the local school, and be located behind a sound wall and a 15-foot high berm with vegetation on top. Detailed acoustic studies will evaluate the combined noise from all fuel cell modules, cooling equipment and other sources to verify that sound meets all applicable noise standards, including at homes and schools. Additional noise mitigation measures would be added if needed to meet all applicable standards depending on acoustic study results. The latest draft layout is shown below.



Preliminary Site Layout

The project site incorporates an adjacent 28-acre sand and gravel operation that currently uses trucks exiting on Geer Street. Use of this parcel for a portion of the data center will eliminate the ongoing sand and gravel operations and related trucking on Geer Street, further reducing local industrial activity.

Advanced Clean Energy Production Onsite Using Fuel Cells

The campus would use high-efficiency fuel cells powered by natural gas to generate electricity onsite, with recovery of waste heat for cooling of data center facilities, and possibly heating for the nearby school, if feasible. Onsite generation will minimize or avoid reliance on the electric grid. This integrated design could potentially achieve overall energy efficiency of 80–90% with heat recovery, vs. grid efficiency in New England of about 40-45%. By utilizing high efficiency fuel cells and otherwise wasted heat, the project could substantially reduce CO_2 emissions compared with conventional electricity generation and separate heating and cooling systems.

The onsite power system will incorporate redundant fuel-cell modules and backup battery systems to maintain reliable operation during scheduled maintenance or equipment outages. The project would not require backup diesel generators.

There were approximately 130 identified fuel cell projects in CT as of 2023, with about 115 for behind the meter operations at hospitals, universities, offices, supermarkets, municipal facilities and data centers. (Most of us have probably walked right by fuel cells without even realizing they are there!) Please see the photo at Stamford Hospital shown below. As shown, the fuel cells are located near the entrance to the emergency room, illustrating their quiet operations. (Incidentally, the first practical deployments of fuel cells were for the Gemini and Apollo 11 space programs in the 1960s, with Pratt & Whitney in CT developing the fuel cells for the Apollo program.)



Stamford Hospital. Benett Medical Center, 2MW. Photo credits: Korea IT Times

Although this project was for a smaller scale application, the fuel cells' modular design allows larger scale deployments by merely adding more modules, as is now being done at data centers and other large commercial and industrial facilities throughout the country.

Since fuel cells make power using an electrochemical process, rather than combustion to move pistons or turbines, fuel cells have negligible emissions of criteria pollutants regulated under the Clean Air Act, and are extremely quiet. CT is a national leader in producing fuel cells, with two of the leading fuel cell manufacturers based in CT. (Fuel Cell Energy in Danbury and Torrington, and HyAxiom based in East Hartford and South Windsor.)

Fuel Cell Energy has just announced it will be hiring an additional 100 people for its plant in Torrington, which is expanding primarily to meet power demands for data centers. (https://hartfordbusiness.com/article/fuelcell-plans-up-to-275m-torrington-expansion-as-data-center-demand-grows/).

Fuel cells also produce relatively concentrated carbon dioxide that can be economically captured and used for commercial purposes, displacing CO2 transported to New England by truck and rail from ethanol plants in western NY and the midwest and underground CO2 formations in the southeast.

Finally, fuel cells are classified as Class I renewable energy producers in CT.

Other Community Benefits

Permanent Skilled Employment: At full development, the campus is expected to support approximately 75–125 permanent, skilled, well-paying jobs.

Economic Development: The project would create opportunities for Connecticut contractors, engineering firms, equipment suppliers and technology service providers, supporting investment and employment throughout the region.

Education and STEM Program Development: The campus could support partnerships with STEM programs for Cromwell's public schools, and for Connecticut universities, colleges and technical schools through internships, apprenticeships, workforce training and research opportunities in advanced computing and energy technology.

Community Compatibility and Environmental Protection

The campus is being designed to minimize impacts on the neighboring properties, the larger community and the environment.

- **Limited Demand for Municipal Services:** Unlike residential and most commercial development, the campus would generate substantial municipal revenue without creating significant additional demand for schools and other municipal services.
- **Minimal Traffic During Normal Operations:** The completed facility would generate relatively few daily vehicle trips compared with many other commercial and industrial uses. Construction traffic would be addressed through appropriate planning.
- **Water Conservation:** The proposed closed-loop cooling system would minimize water consumption and wastewater discharge.
- **Noise and Visual Protection:** Detailed acoustic modeling, substantial setbacks, landscaped berms, sound barriers and retained vegetation will assure compliance with noise standards and limit visual impacts.
- **Environmental Monitoring and Corrective Measures:** Appropriate monitoring and corrective measures will help ensure continuing compliance with environmental requirements.

Alternative Site Uses

An important consideration in evaluating the proposed data center is how the property might be used if the data center project does not proceed. Other permitted uses could include manufacturing and other commercial or industrial activities, or solar fields. Depending on their design and operation, many of these uses could generate substantially more truck traffic, require more extensive land development, and create different noise, environmental and neighborhood impacts than a data center.

Importantly, the proposed permanent dedication of approximately 20 acres of commercially zoned land as farmland is unlikely to occur if the data center does not proceed because another project developer would have little incentive to incur the expense to acquire the existing solar rights at substantial cost simply to preserve the land.

The question is not simply whether the property should be developed, but which use would provide the greatest long-term economic, environmental and community benefits while minimizing impacts on surrounding neighborhoods.

A Vision for Cromwell's Future

The Cromwell Data Center will demonstrate how advanced technology, efficient energy systems, economic development and environmental preservation can reinforce one another. By bringing these elements together, the project will contribute to Cromwell's economic prosperity, protect its natural resources and deliver lasting benefits to the community.