

Transparent solar windows enabling buildings to generate their own clean energy



clearpower.energy Nashua, NH

Technology B2B Hardware Manufacturing VC-Backed

Highlights

VC-Backed

Raised \$250K or more from a venture firm

Regular Updates

Founders have a strong track record of investor updates.

- 1 Selected by the USGBC-CA for its Net Zero Accelerator
- 2 \$7M+ raised from venture capitalists including Convexa and iEnergies as well as retail investors
- 3 Manufacturing machinery built and ready as we begin commercialization
- 4 \$23B building-integrated photovoltaics market growing 21% p.a. driven by climate impact regulations
- 5 Architectural Record Product of the Year 2024 with major glass manufacturer partnerships
- 6 6 patents protecting technology using proven silicon cells, not experimental materials
- 7 World-class team: decades of experience from Evergreen Solar, Daystar Tech & BTU International

Featured Investor



ROGER GREGORY HAMEL

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My company that helps the unemployed fill skills-gaps through training and certifications to get them into their next GREAT job!
visible-edge.com

*Stellaris has a development and support team with vast cumulative experience. They created ClearPower Energy, which is revolutionizing sustainable architecture with its groundbreaking photovoltaic window technology. As the demand for energy-efficient and environmentally friendly building solutions grows, ClearPower offers a seamless integration of solar power generation into the very fabric of modern structures. For me, investing in their team and technology represents a rare opportunity to support a technology that is not only visionary but also commercially viable and urgently needed in today's energy-conscious world. At a time when the global demand for sustainable infrastructure and renewable energy solutions is accelerating, ClearPower is uniquely positioned at the intersection of solar innovation, aesthetic architectural design, and environmental impact.

At the heart of ClearPower's innovation are their building-integrated photovoltaic (BIPV) windows. These windows incorporate bi-facial, crystalline silicon solar cells—proven for their durability and performance—sandwiched between two panes of insulated glass. Uniquely arranged in a horizontal orientation, these cells resemble tiny Venetian blinds that are always open, rendering them virtually invisible from a short distance. This design not only maintains the aesthetic and transparency of conventional windows but also enables them to generate electricity efficiently.

Performance-wise, ClearPower's BIPV windows are exceptional. They can harvest up to five times more electricity than competing technologies, with annual power outputs approaching those of non-transparent high-efficiency solar panels, depending on the building's location and orientation. This capability transforms windows into significant contributors to a building's energy needs, reducing reliance on external power sources and lowering utility costs.

Source: [www.clearpower.com](#)

Beyond energy generation, these windows offer additional benefits. They contribute to thermal regulation by blocking direct sunlight during warmer months and allowing it during colder periods, thereby reducing heating and cooling demands. Moreover, installations of ClearPower windows are eligible for a 30% federal investment tax credit, akin to traditional rooftop solar systems, enhancing their financial appeal. ClearPower's technology has undergone rigorous testing by independent entities, including the U.S. Department of Energy's National Renewable Energy Laboratory, affirming its efficacy and reliability. This validation underscores the company's commitment to delivering high-quality, performance-tested solutions. In an era where building codes increasingly mandate reduced fossil fuel consumption and a shift towards clean, carbon-free energy, ClearPower's photovoltaic windows offer a timely and effective solution. They empower buildings to become self-sustaining power plants, aligning with global sustainability goals and contributing to a greener future. In summary, ClearPower Energy stands at the forefront of sustainable building innovation. Their photovoltaic window technology not only meets the aesthetic and functional demands of modern architecture but also addresses the pressing need for renewable energy integration. By choosing ClearPower, stakeholders are investing in a solution that delivers environmental benefits, economic savings, and a step forward in the fight against climate change."

& 42 more

Team



Jim Paull SPV Voting Proxy



Jack McCaffrey Head of Manufacturing

Jack is a master at building solar factories and putting together teams of engineers and manufacturing professionals who work really well together. He has done that at Evergreen Solar, Daystar Technologies and BTU International.



Jen David Director and Secretary

Jan is an environmental lawyer with a JD and a Masters in environmental law and is a Vice President at Somo International. She carries her passion about the environment into her excellent work as a Director of Stellaris.



Peter Morse Senior Automation Engineer

Peter is passionate at making things that make things work, engineering innovative automated manufacturing machinery at Stellaris, Evergreen Solar and Polaroid. Helping Stellaris for over 15 years, he's been a major force behind our accomplishments.



James Paull Director and Treasurer

James brings his expeditious problem solving skills to both his role as Director of Stellaris and as Senior Business Development Manager for Good Harbor Group, a talent acquisition organization.



Rob Janoch Senior Engineer

In addition to being a very accomplished solar engineer, Rob is a self-admitted gismo geek who loves all things mechanical, both old and new. His considerable laser expertise is really important for our manufacturing.

Pitch Deck



Making Building Facades Electricity Generators!

Problem

1. Buildings are responsible for 40% of global energy consumption.

Buildings consume roughly 40% of global energy, yet the windows covering their facades consume energy while producing none. Buildings need to electrify to combat climate change, yet high-rise buildings with limited roof space have no viable option for generating their own clean electricity.

Existing "solar windows" are either opaque (blocking views and natural light) or achieve only 2-3% efficiency - too weak to justify their cost. Moreover, other building-integrated solar window technologies require specialized glass manufacturing or entirely new production methods.

This leaves building owners without a source of site-generated clean, inexpensive electricity to reduce carbon emissions, comply with emission mandates, and alleviate climate change.

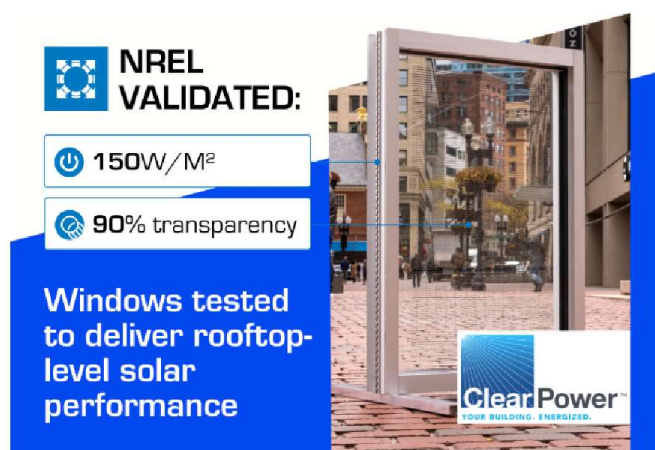


Sources: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_1965,
<https://www.bcg.com/publications/2025/economic-growth-opportunities-greening-world>

Solution

ClearPower transforms ordinary insulated glass windows into electricity-producing building components without changing how windows are manufactured, installed, or used.

Instead of treating windows as passive building materials, ClearPower helps turn them into energy infrastructure. ClearPower also achieves a combination of transparency and power generation that has long challenged to solar window industry.



Market

Around the country, laws are being passed requiring buildings to drastically reduce greenhouse gas emissions by eliminating fossil fuels. Energy codes are prohibiting new natural gas hook-ups and mandating renewable energy integration.

The global building-integrated photovoltaics market is exploding from \$23.67B in 2023 to \$89.8B by 2030 - growing at 21.2% annually. The US market alone is surging at 22.1% yearly, driven by these mandatory decarbonization laws.



THE MARKET

\$89.8B



Source: <https://www.grandviewresearch.com/industry-analysis/building-integrated-photovoltaics-bipv-market>

Early Traction

We have achieved significant early traction:

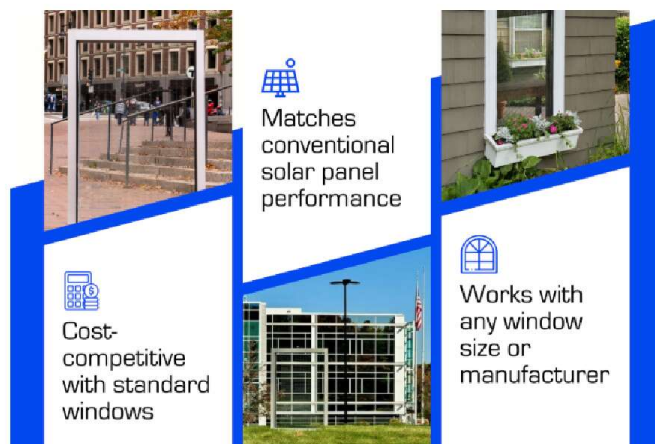
- Established partnership with window Fabricator Diamond Windows & Doors
- Selected by USGBC-CA's Net Zero Accelerator
- Continued validation of performance by the National Laboratory of the Rockies (formerly NREL)
- Awarded Product of the Year by Architectural Record



The Product

Unlike competitors who embed experimental materials achieving just 2-3% efficiency, Stellaris uses proven bifacial silicon cells with 20+ year lifespans. Our patent-protected technology (6 issued) isn't integrated into the glass itself - it's an insert built into multi-pane windows.

This insert design works with any window manufacturer - no custom glass fabrication or special sizes required. While others chase unproven technologies, we deliver performance matching conventional solar panels using industry-standard components that adapt to virtually any window size.



By leveraging the window's existing encapsulation, we eliminate the costs of frames, backing sheets, and adhesives needed by conventional solar panels. This makes Stellaris windows cost-competitive while delivering superior performance.

What's Ahead, Our Roadmap

What's Ahead, Our Roadmap

Over the next 12-18 months, we plan to:

- Validate certification pathways
- Complete Net Zero Accelerator deployments
- Expand fabricator partnerships
- Secure additional commercial installations
- Reduce manufacturing takt-time
- Complete freedom-to-operate review

Use of funds

What this round will accomplish:

- Commercial pilot deployments
- Certification pathway validation
- Manufacturing scale-up
- Fabricator partner expansion
- Commercial sales growth

Why ClearPower is Different

Traditional Solar Windows	ClearPower
Specialized glass	Standard insulated glass windows
New manufacturing	Existing fabricators
Experimental materials	Proven silicon
Difficult adoption	Existing channels
High cost	Window industry economics

Own a Piece of the Solar Breakthrough

