

EllisDon London Office – London, ON

Solstex - Solar Facade System - Reclad

When a chance came up to try new and innovative products on a major contractor's local office, Elemex® jumped at the opportunity. Two new product lines - Solstex and Stonitex® - were selected to highlight the capability and ingenuity of the facade company. Along the base of the south and east walls, Cambrian Black granite in a polished finished was selected. This product is sourced from North American quarries, and provides a timeless look that has become expected of natural stone products.

Project City: London, ON

Products: Solstex, Alumitex®, Stonitex®

Industry: Industrial

Square Footage: 1,494 sq.ft. ACM, 980 sq.ft.

Solstex, 100 sq.ft. Stonitex

Architect: EllisDon Corporation

Year Built: 2020

The majority of this facade is Solstex – the newest product offering from Elemex. Solstex is a renewable energy product offering that generates clean energy for use within any building. This project utilizes thin-film CdTe solar technology to generate electricity from solar irradiance. Over 1200 sq. ft. of Solstex was installed, representing a DC wattage of 18.4 kW. The AC output of the project is 15 kW. In its first year, this facade will generate approximately 17500 kWh, enough to power 100 60W light bulbs for a full year¹.

"Our favorite part of the Solstex system is its dual functionality. With traditional photovoltaic systems, you need to worry about compatibility/warranty issues with other building envelope elements, and the systems themselves have relatively long payback periods. With Solstex you get the energy benefits from the PV and you get to discount the cost of the system against traditional cladding materials. On top of that, the system is visually stunning."

JP Frydrychowicz, P.Eng., Director, Power & Building Systems, EllisDon Corporation



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Architectural Facade Systems

Toll free: 1-844-435-3639

info@elemex.com

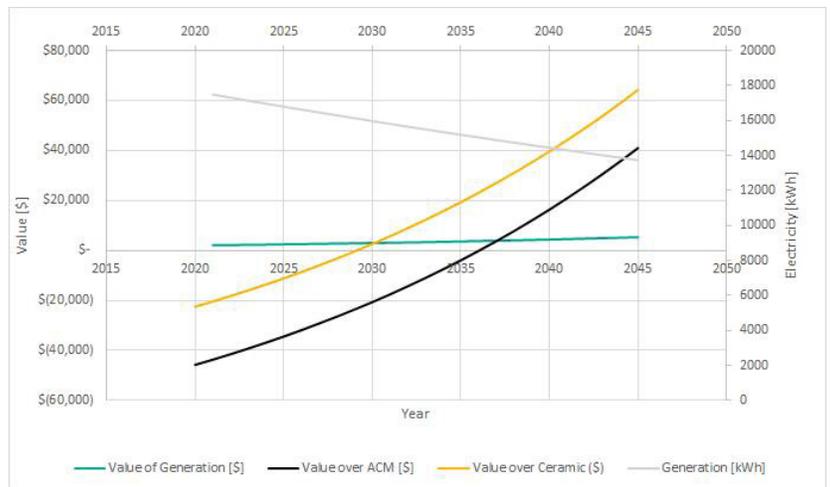
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System Output	15 kW AC
Panels Utilized	Solstex 1200
First Year Generation	17,500 kWh
CO2 Displaced in the First Year	8.75 tons
Equivalent Trees Planted	225 medium growth coniferous trees
Estimated First Year Return	\$2,100
Incremental Cost of Solar over Alumitex®	\$46,000
Associated Return on Investment (ROI)	17 years after year of completion
Associated Internal Rate of Return (IRR)	5%
Incremental Cost of Solar over Ceramitex®	\$22,500
Associated Return on Investment (ROI)	10 years after year of completion
Associated Internal Rate of Return (IRR)	12%
Other Materials Present	Matte Black Aluminum Composite Material, Cambrian Black Thin Format Granite

Solstex is the only facade that can provide a return on your investment. Comparing the cost of Solstex to a traditional facade allows an incremental cost base to be used as the basis for investment calculations. Depending on the material Solstex is being installed in lieu of, ROI periods for the London, Ontario region are as low as 9 years, with a corresponding 12% IRR.²

Along with the financial benefits of Solstex come the environmental benefits. Photovoltaics generate clean energy which reduce carbon emissions when compared to oil-based energy sources. This can be measured in a variety of ways, primarily either by the weight of the CO2 displaced or the equivalent trees that would need to be planted to have the same carbon displacement. This project displaces 8.75 tons of carbon in its first year, which is equivalent to planting 225 medium growth coniferous trees.³ Over the lifetime of the project (25 years), almost 200 tons of carbon will be displaced.



Solstex is a product that promotes corporate responsibility and sustainable building design. For more info, check out our website at www.elemex.com, and our Solstex line at <https://elemex.com/products/solstex/>.



¹Assuming 8 hours of operation a day and 365 days in a year.

²Assuming local electrical price of \$0.12/kWh, with 5% annual increases (area's historical average).

³Assuming carbon displacement factor of 502 g/kWh, and trees planted displace 0.039 tons of carbon per year.