

BIPV Efficiencies

Presentation to HRM Environment and
Sustainability Standing Committee
Wednesday, May 5, 2022



AzSpecd Solutions
REMARKABLE RENEWABLES

Acknowledgement

I would like to begin by acknowledging that we are in Mi'kma'ki, the traditional territory of the Mi'kmaq people.



AzSpecd Solutions
REMARKABLE RENEWABLES

Remarkable Renewable Products

Benefits of Flower Turbines

Patented cluster effect makes turbines more efficient

Flower Turbines are as quiet as the wind itself

Birds can easily see and avoid Flower Turbines

www.flowerturbines.com

Coming Soon!- Flower Turbines



MITREX™

Mitrex Solar-Canada

BIPV Cladding, Windows and Glass Railings and the world's largest manufacturer of BIPV



Solar Vision-Canada

Canada's Largest Manufacturer of Commercial Solar Lighting



The RainStick Shower-Canada

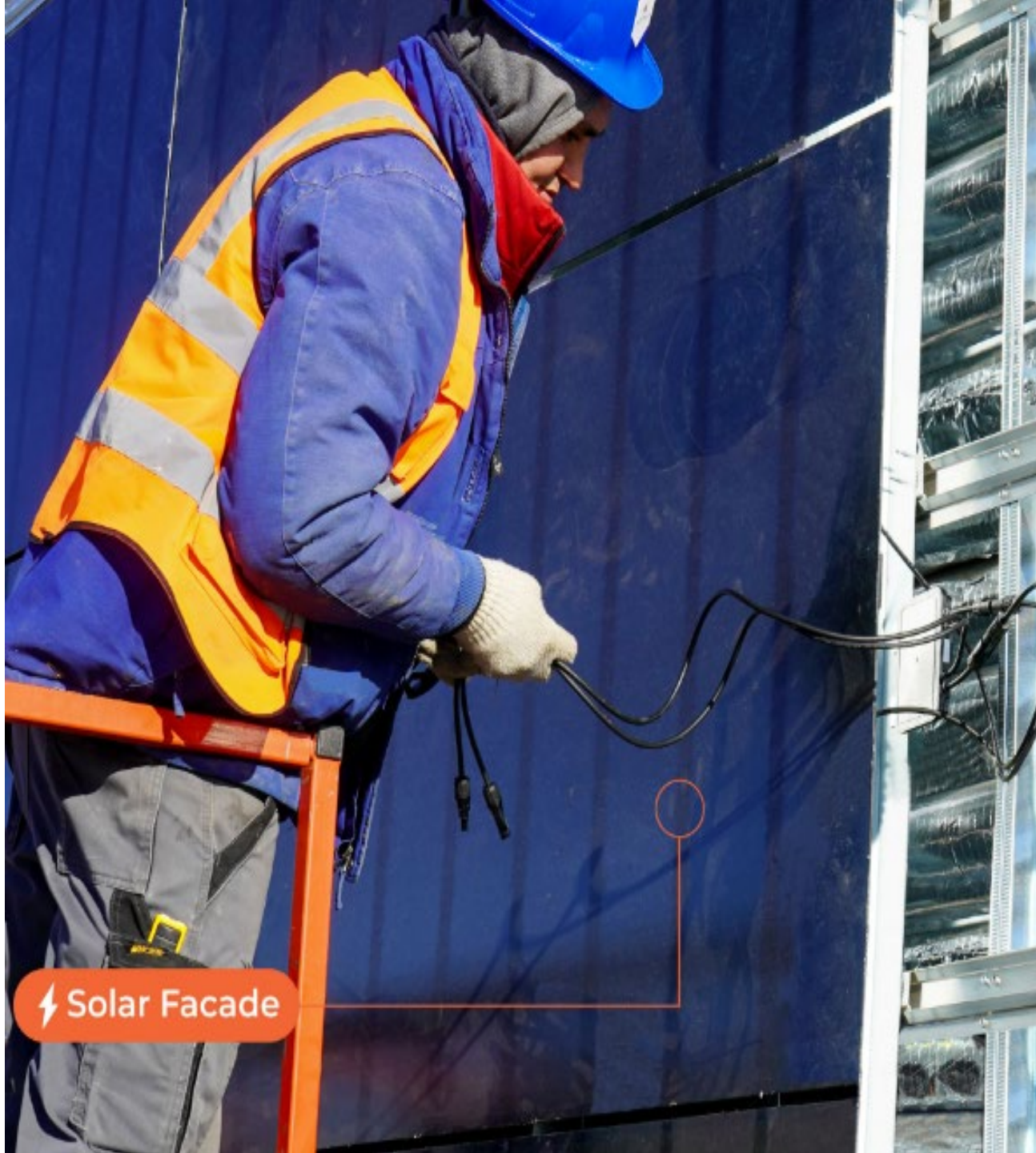
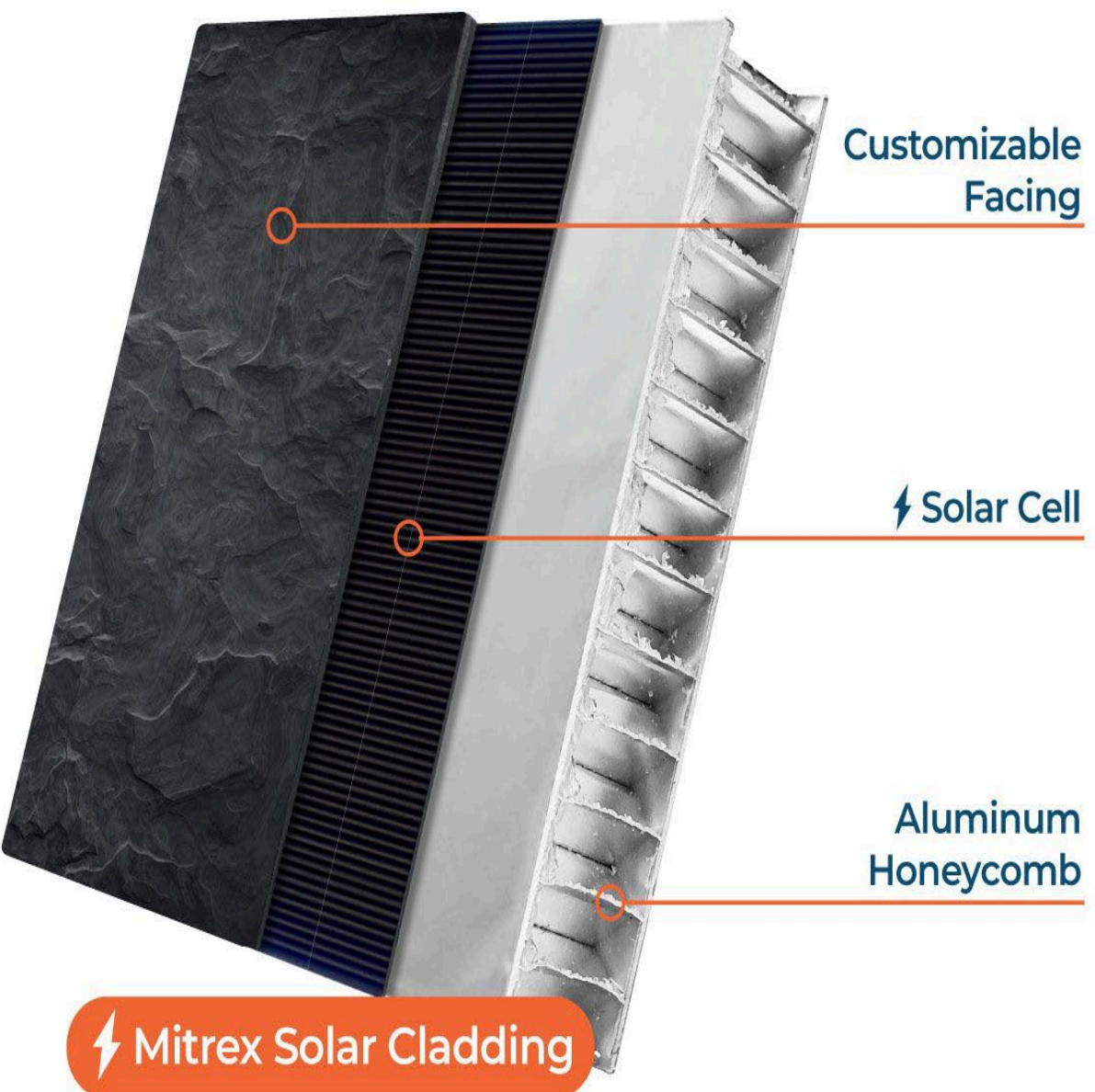
Recycles 80% of shower water in real time



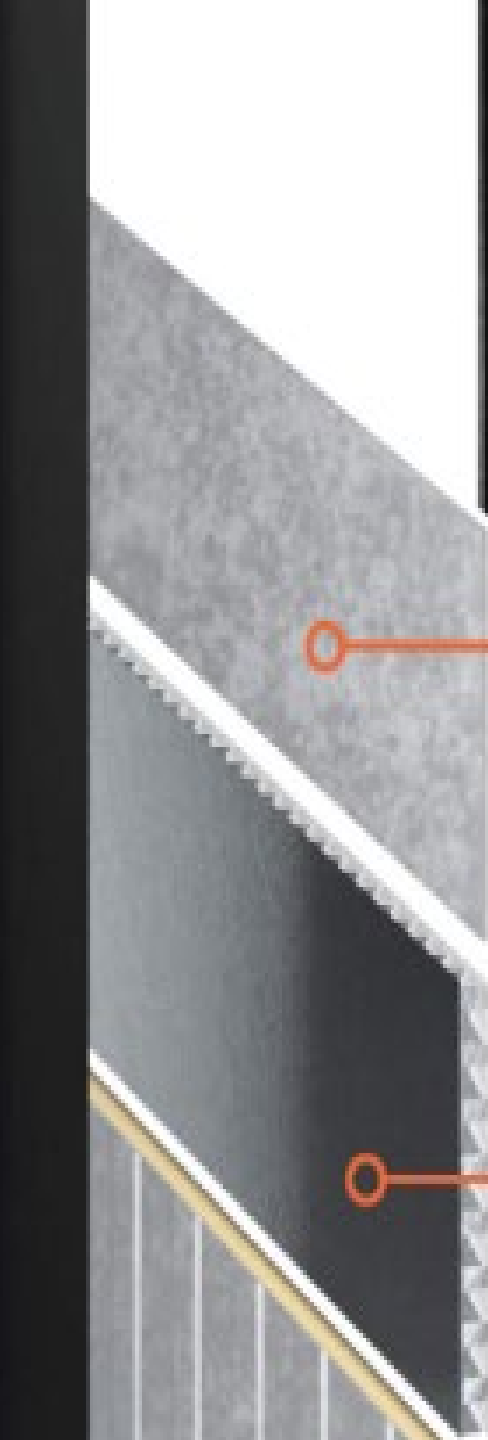
Phillips Temro EV Chargers- USA

The leading name in EV Charging Technology





Customizable
Facing



Galvanized
Backsheet

Aluminum
Honeycomb



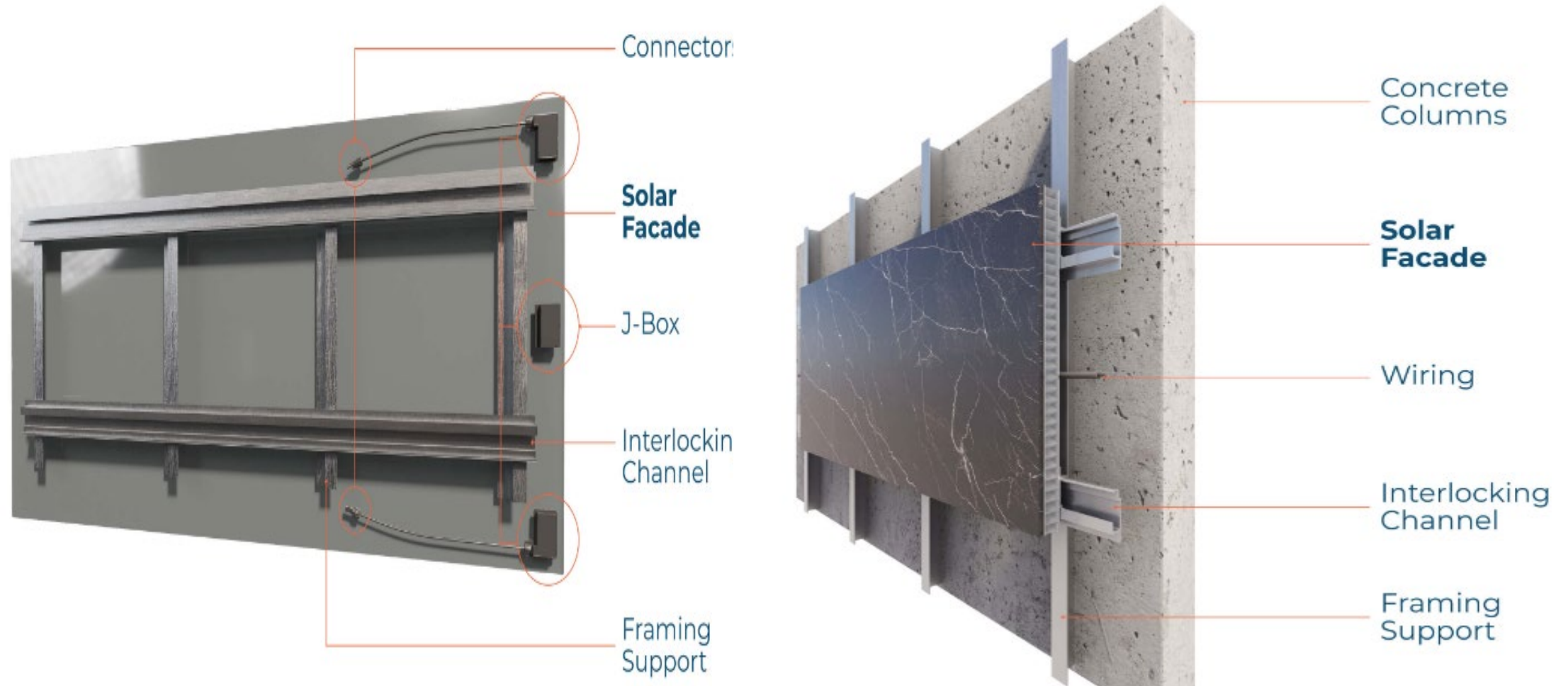
Unlimited Options

Aesthetic Energy Generation

**Customizable
Designs and Patterns**

Installation

For new construction or retrofits we use a very traditional rainscreen system





Mitrex BIPV Cladding

**Existing Old Masonry
Facade**

The Opportunity

Rendering for a project in Ottawa

Building is 82 years old

Proposal to clad South and West Sides in both Mitrex cladding and Solar Windows will generate an estimated 70% of the building's power needs



1 Brick Wall

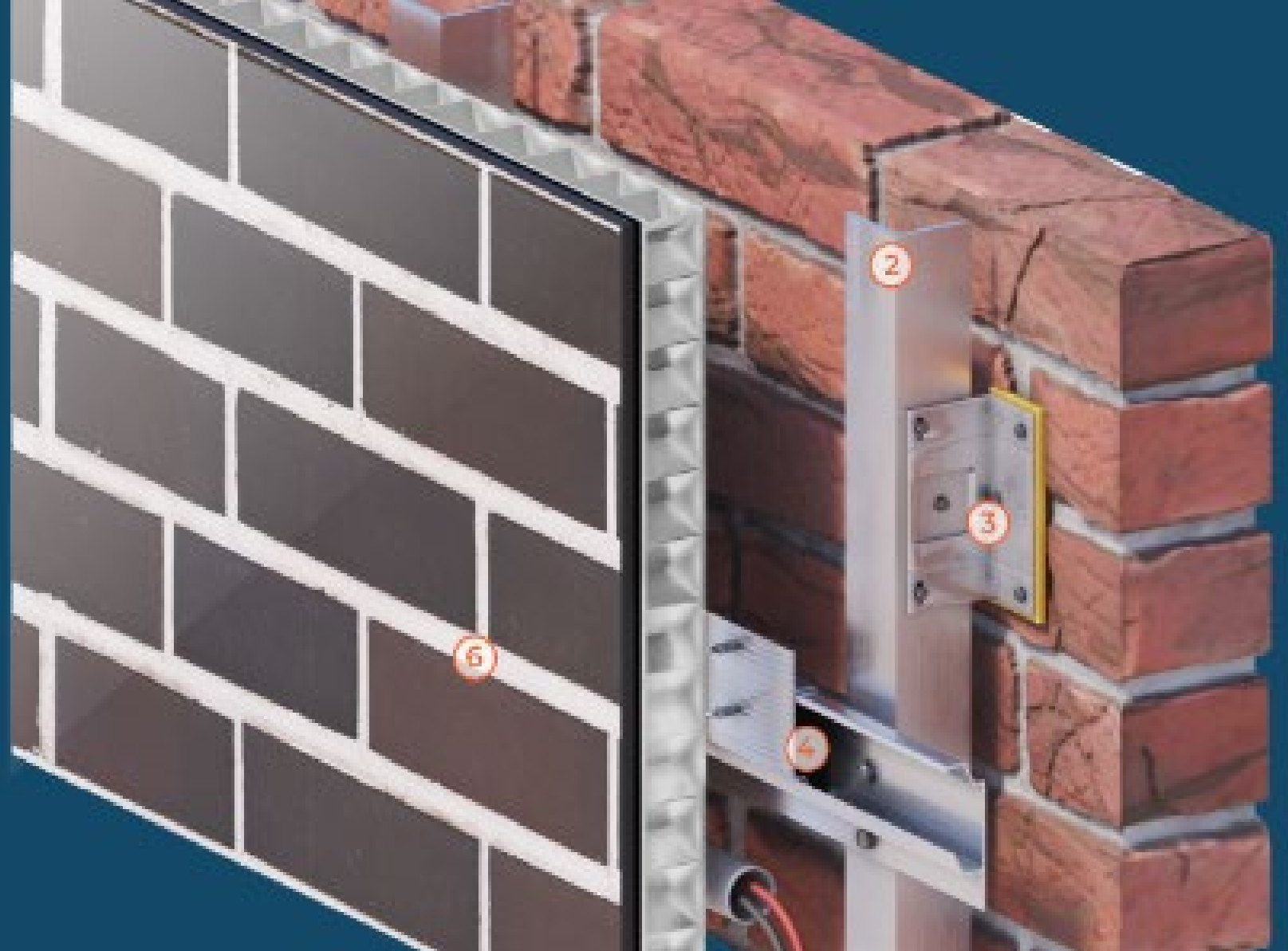
2 L-Angle

3 Thermally Broken Bracket

4 Interlocking Channel System

5 Wiring

6 Mitrex Solar Panel



Typical Retrofit



Opaque



THE NUMBERS

Power Generated

Cost To Install



Opaque Glass

**Solar Glass and
Balcony Rails
160-190W per
Sq m**

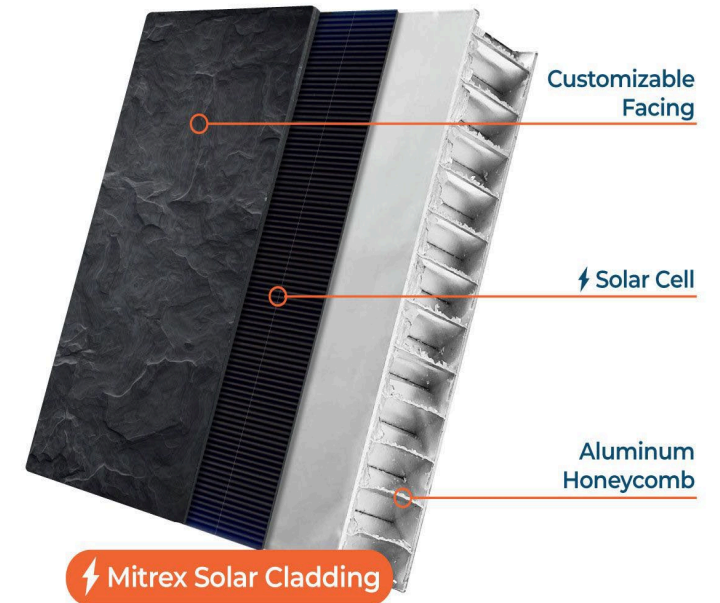


Semi Opaque Glass



BIPV CLADDING

- 170W Per Square Meter of Cladding Installed is Generated



Projects and Case Studies

Proof of Concept

Testing has now been
verified by real projects

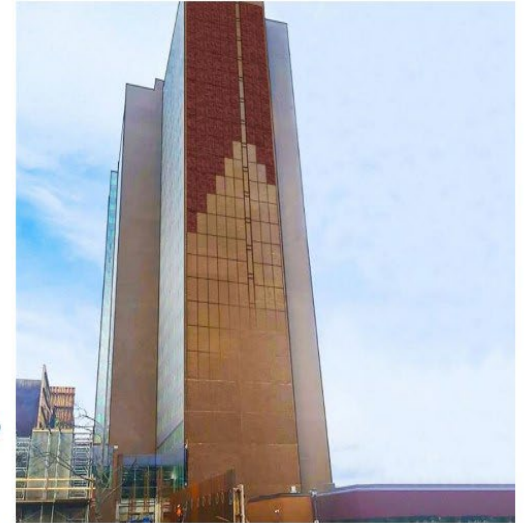


SMU Loyola Refit

By the Numbers

- 6000 square feet of Mitrex BIPV Cladding
 - 48 Sq feet of Solar Windows
 - A reduction of approximately 2280 tons of CO₂e over 30 years *
 - 3,000,000 KWH of clean energy generated over 30 years or 100,000 per year*
-
- *Dillon Consulting estimates

St. Mary's University, Halifax Loyola Residence



St. Mary's University in Halifax is taking a leadership role by adopting a sustainable option for the building's modernization efforts. The installation consists of over 6,000 sq. ft of solar cladding accented by a vertical semi-opaque curtain wall on the south elevation. The design of the panels will be a delicate combination of school colors with a subtle reveal of solar technology – a perfect blend of traditional and modern elements

Thank you to the whole Team at Mitrex, Ellis Don, and Peter Connell at DSRA Architecture for their work on this, our very first Mitrex Solar project in Halifax. Not only will this dress up a tired old building, but it will generate clean green power for the building while reducing the carbon footprint. This is an excellent example of how Mitrex is not only an exceptional new build system but also allows us to turn tired, energy sucking buildings into highly efficient green energy producers. Stay tuned as this will be the first of many projects you will see in Atlantic Canada as government officials, Architects, and developers realize the potential benefits of Mitrex BIPV technology.

www.azspecd.com

RemarkableRenewables



By the Numbers

- 7000 square feet of BIPV cladding
- Generation Capacity 100KW or 100,000 W

Warehouse Retrofit- Toronto

Midland Ontario Courthouse

10,000 sq feet of BIPV Cladding (retrofit of a 55 year old structure)

System Generation size of over 160KW



MIRAMICHI WELLNESS MULTIPLEX

Cladding Mitrex



Pool
Solar
Glass



South Elevation will use 10,000 Sq feet of Mitrex Cladding as well as 6800 sq feet of Opaque Solar Windows Fronting the swimming pool.



Thank you. Questions?

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BLES