Transparent Electricity-Generating Liquid Coatings & Applications

SolarWindow Technologies, Inc.

Symbol: WNDW

Sustainability Presentation Q3 2021

SOLAR WINDOW TECHNOLOGIES, INC.

bringing LIQUID ELECTRICITY to life

TRANSFORM ORDINARY SURFACES INTO ELECTRICITY GENERATING PRODUCTS

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Actual power, energy production and carbon dioxide equivalents modeled may vary based upon building-to-building situational characteristics and varying installation methodologies. No representation is made as to the reasonableness of the assumptions made in this presentation or the accuracy or completeness of any modelling, scenario analysis or back-testing. The information in this presentation is not intended to predict actual results and no assurances are given with respect thereto. None of the Company, its advisers, connected persons or any other person accepts any liability whatsoever for any loss howsoever arising, directly or indirectly, from this presentation or its contents. All information, opinions and estimates contained herein are given as of the date hereof and are subject to change without notice. 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SOLARWINDOW TECHNOLOGIES, INC.

Company Overview

SolarWindow's Research & Development program includes agreements with the United States Government Laboratories.

With nearly 120 patent claims which are protected in the United States, Europe, China, and elsewhere, SolarWindow's LiquidElectricity™ promises to bring a new form of electrification to the world.

A New Form of Electrification

Transform Ordinary Surfaces into Electricity Generating Products

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*14.72% Record Power Conversion Efficiency

Among highest ever published by any commercial OPV developer.

In the world of organic photovoltaics
14%+ PCE has long been considered unachievable.

*Independently certified at the U.S. Dept of Energy National Renewable Energy Laboratory

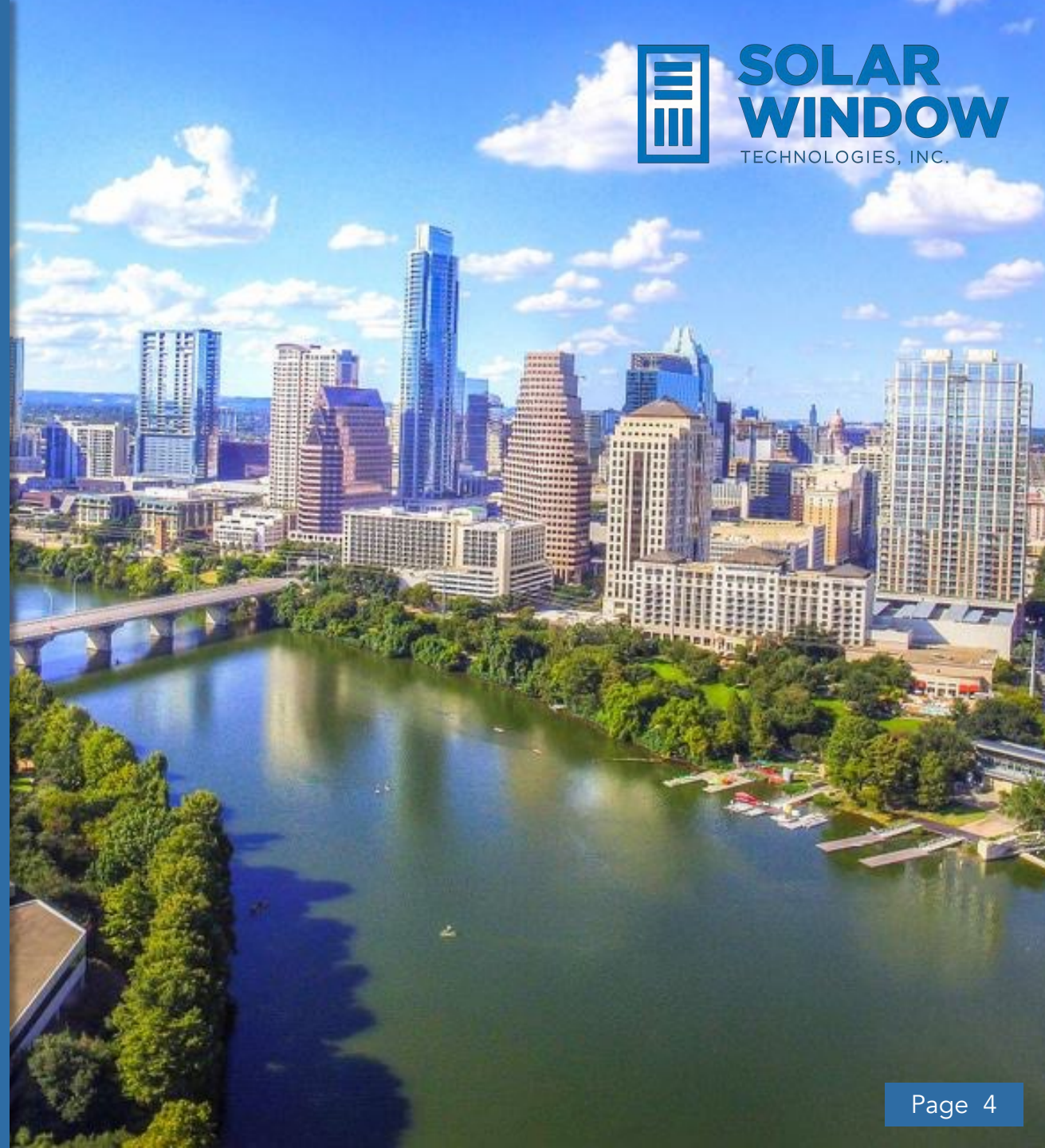
SOLAR WINDOW
TECHNOLOGIES, INC.

A New Form of Electrification

Transform Ordinary Surfaces
Into Electricity Generating Products

Applying LiquidElectricity™ to Our Lives

Providing the path to a sustainable future, and powering the world with clean energy



SOLAR WINDOW TECHNOLOGIES, INC.

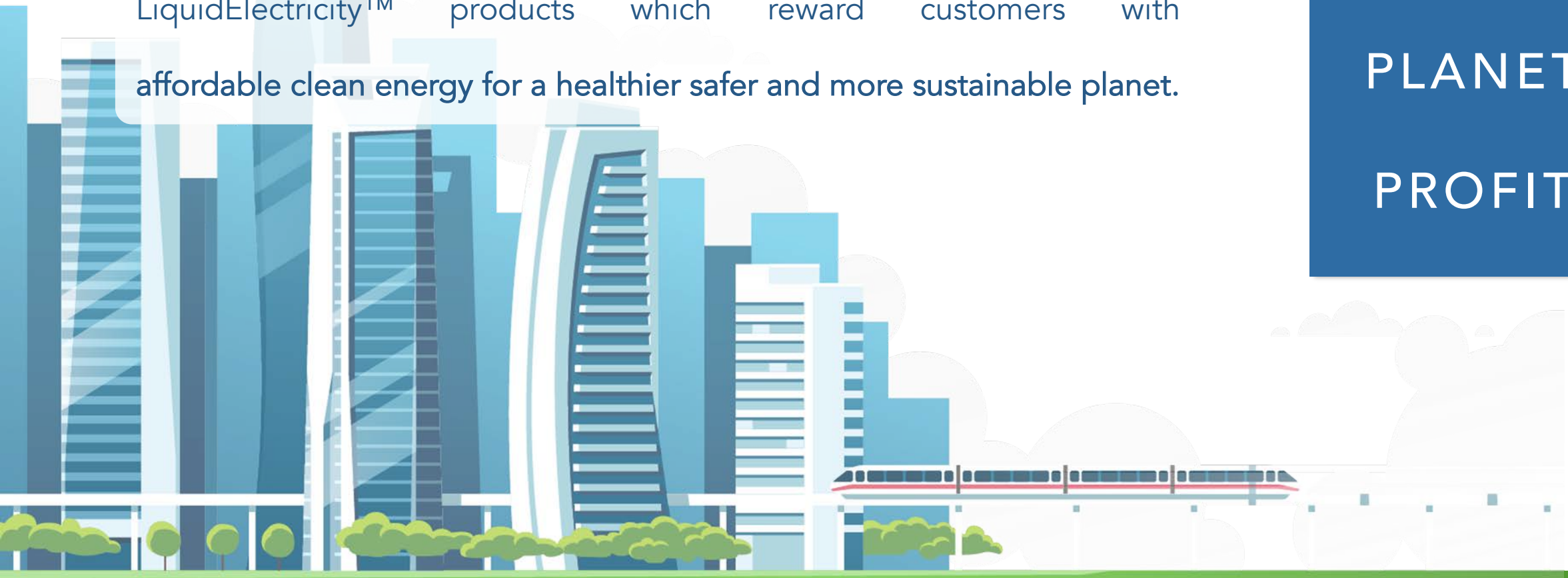
The SolarWindow Promise

SolarWindow is here to engineer, design, and deliver, renewable LiquidElectricity™ products which reward customers with affordable clean energy for a healthier safer and more sustainable planet.

PEOPLE.

PLANET.

PROFIT.

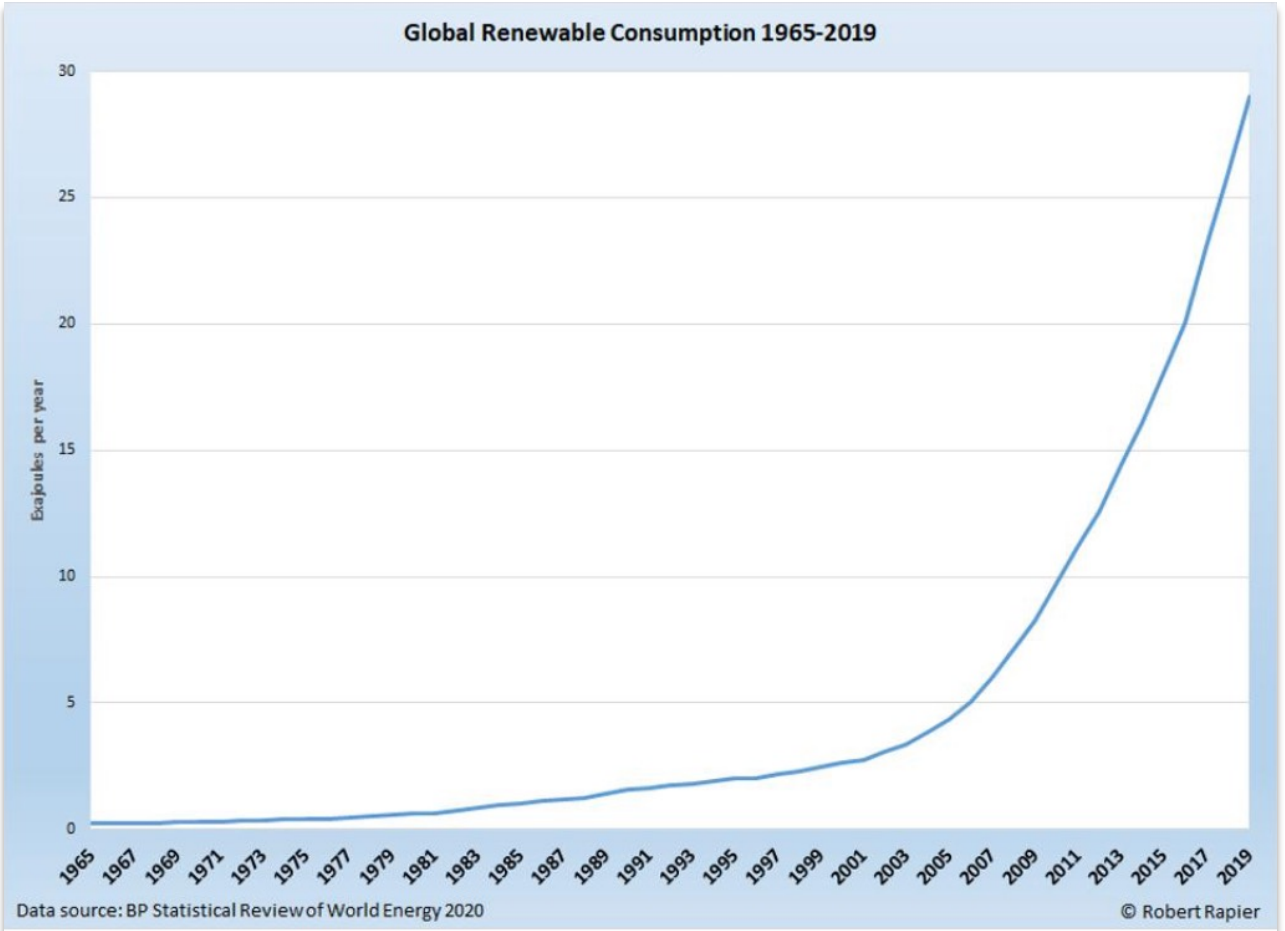


Our Future of Renewable Energy

TWO MAJOR FACTORS EFFECTING GLOBAL ENERGY TRENDS

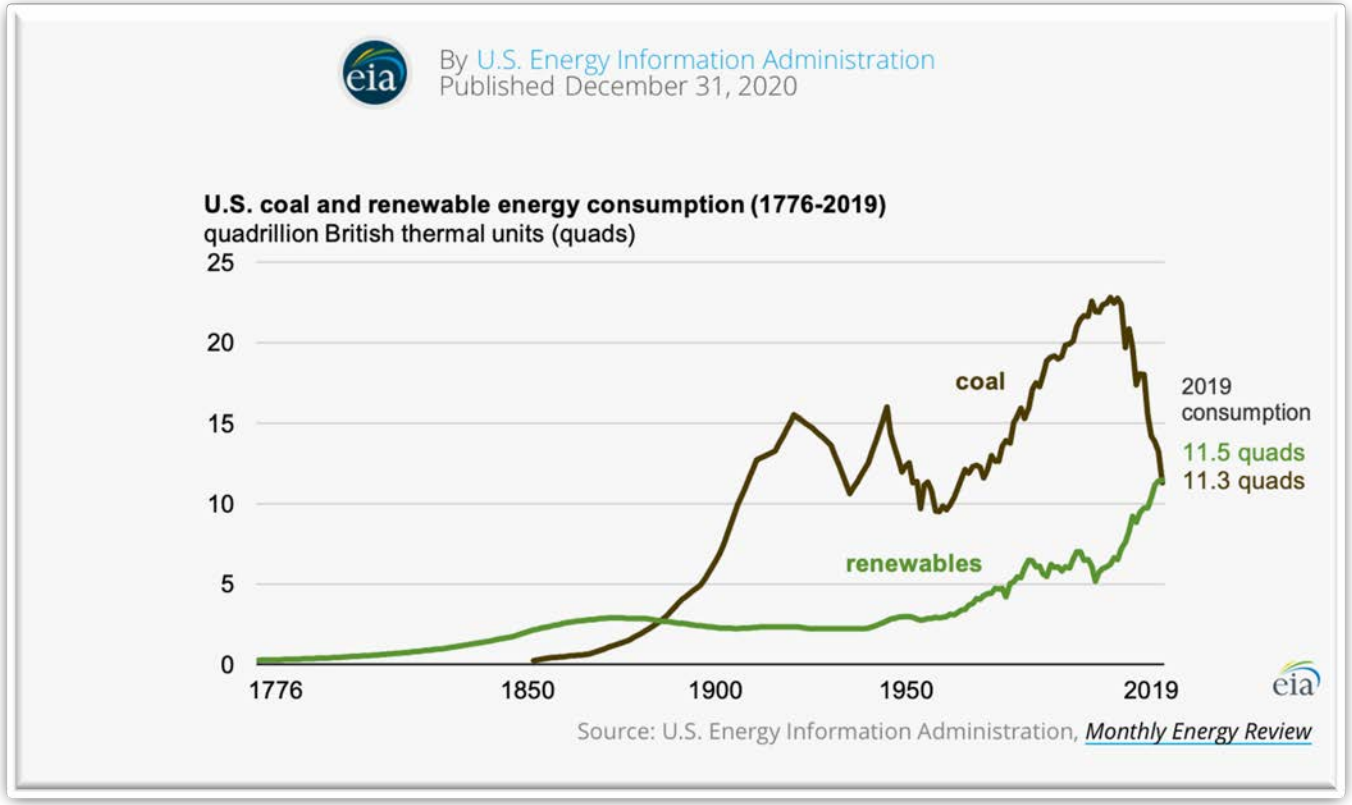
1. **ECONOMIC DEVELOPMENT**

2. **TECHNOLOGICAL ADVANCEMENT**



Renewable energy consumption since 1965. ROBERT RAPIER

U.S. Renewable Energy Consumption Surpasses Coal



https://cleantechnica.com/2020/12/31/u-s-renewable-energy-consumption-surpasses-coal-for-1st-time-in-over-130-years/

2019 Renewable Consumption **11.5 quads**

This trend is expected to increase year-over-year

A Future Powered by Renewable Energy

LiquidElectricity™ is a revolutionary, transparent, solar technology.

This ground-breaking technology, can be applied to glass, plastics, and films and will have the ability to generate electricity from natural, artificial, low, shaded, and reflected light. By harnessing endless amounts of solar energy, it has the capacity to produce the power you need to enhance your products immensely & sustainably

LiquidElectricity™

generate electricity when applied to

Glass, Plastics, & Films

ADAPTABLE

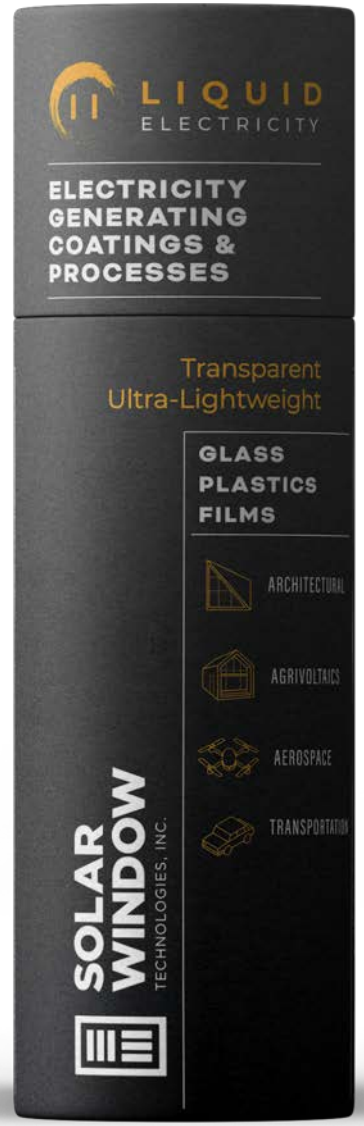
Generate clean electricity on transparent glass, plastic surfaces, and flexible substrates.

ULTRA THIN

Only 1/100th the thickness of a human hair. Engineered for fast throughput manufacturing.

PERFORMANCE

Generate power from natural sunlight, shaded conditions, and artificial lighting.



SolarWindow: Beyond the Rooftop with LiquidElectricity™

Powering a New Era of Electricity-Generating Products

Conventional Solar = Limited Applications

Requires Large Dedicated Footprint

- Rooftop Installations
- Ground Installations

SolarWindow Products = Unlimited Applications

LiquidElectricity™ Starts Where Solar Ends

Cars & Trucks	TRANSPORTATION
Buses & Transit	
Aerospace	
Windows	BUILDINGS
Facades	
Spandrels	
Glass	AGRICULTURE
Plastics	
Metals	

ULTRA LIGHTWEIGHT | LOW COST | ATTRACTIVE

CLEARLY ELECTRIC™

A Transparent Future

Transparent SolarWindow™

Non-Transparent SolarWindow™

SOLAR WINDOW TECHNOLOGIES, INC.

Triple Bottomline with Rapid Financial Payback

Winning with LiquidElectricity™

↓ CO_2

Win for Environment

Single building installation can avoid 2.2 million miles of CO_2 vehicle pollution; 12-times more than solar.

~15%

Power Efficiency

High-performance, transparent, electricity-generating coatings.

Record achievement for highest OPV power conversion efficiency published by any commercial developer.

01-YR

Rapid Financial Payback

Under one year, industry's fastest calculated financial return for tall towers.

Works in natural, shaded low-light, and indoor light.

Based on power and financial modeling with SolarWindow installed on a 50-story building.

The Cost of Fossil Fuels

HIDDEN COSTS AND HARMFUL EFFECTS

Fossil fuels emissions are linked to global environmental harm, including global warming and climate change.

- Greenhouse Gasses (GHG's)
- Climate Change
- Health Hazards
- Economic Costs
- Air Pollution

https://yaleclimateconnections.org/2019/04/climate-change-could-cost-u-s-economy-billions/

Benefits of Renewable Energy

- Reduced Global Warming
- Reliable and Resilient
- Stable Energy Prices
- Inexhaustible Energy
- Improved Public Health
- Consistent Energy Access

As renewable adoption increases, environmental socio-economic benefits become clear.

A Global Shift to Renewables

Fossil Fuels Will Be A Thing of the Past

200
COUNTRIES

Almost 200 countries from all over the world have signed to be 100% renewable by 2050.

139
ROADMAPS

139 countries have developed roadmaps to achieve 100% renewable energy efficiency in the coming years.

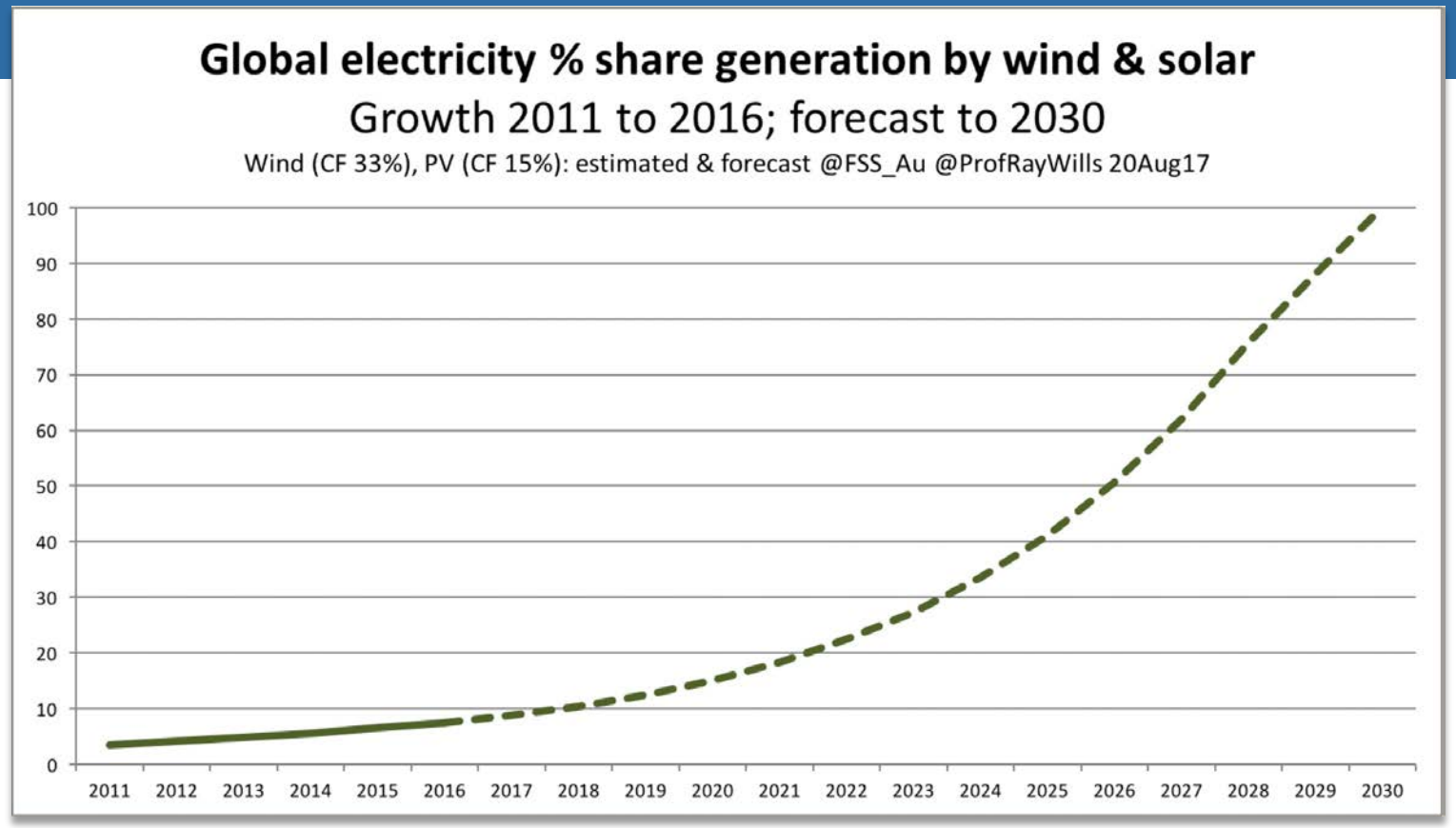
100%
RENEWABLE

Researchers have found that, with current technology and industrial capabilities we could be 100% renewable by the year 2050.

https://spectrum.ieee.org/energywise/energy/renewables/100-percent-renewable-energy-for-139-countries-by-2050

Global Renewable Energy Growth in the Next 10 Years

The Train is Leaving – Time to Invest in Renewables



World Energy: 50% Renewable by 2025

1,200GW growth in the next 5 years;

equal to the total electrical capacity of the US

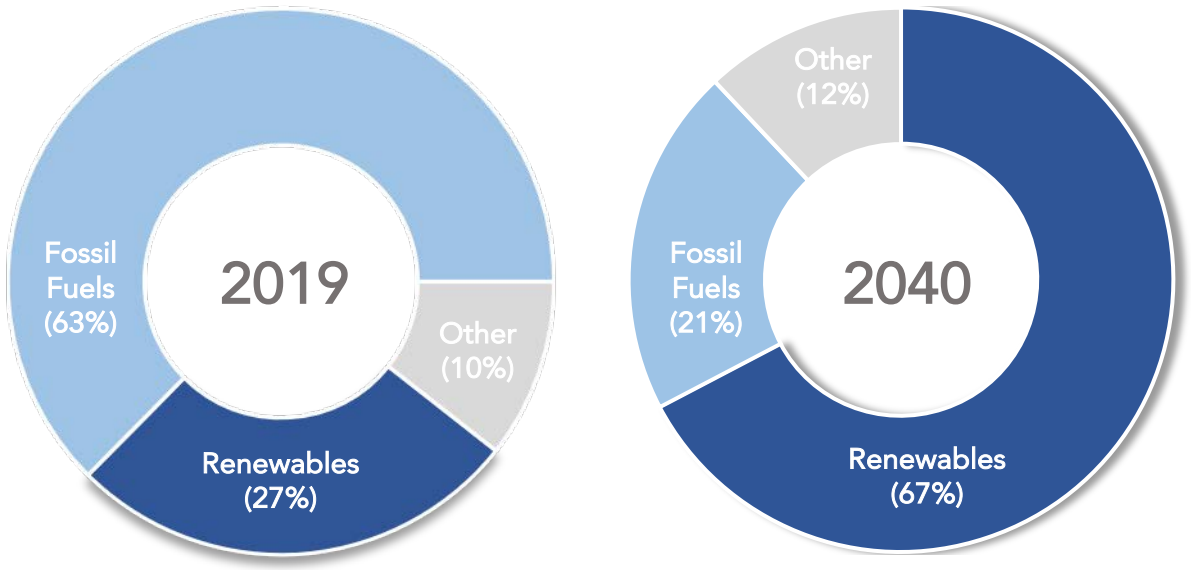
Solar cost to decrease by 35% by 2024

Sustainable Energy, Powering Today, Protecting Tomorrow

Renewables will be the Dominant Source of Energy by 2040

Accounting for 67% of Global Electricity Generation

Electricity Generation by Source



Source: IEA (Tracking Power June 2020 Report)

"Solar and Wind Capacity will Overtake both Gas and Coal Globally by 2024"

- *International Energy Agency (Nov 2020)*

"Solar is Now the Cheapest Form of Electricity for Utility Companies to Build"

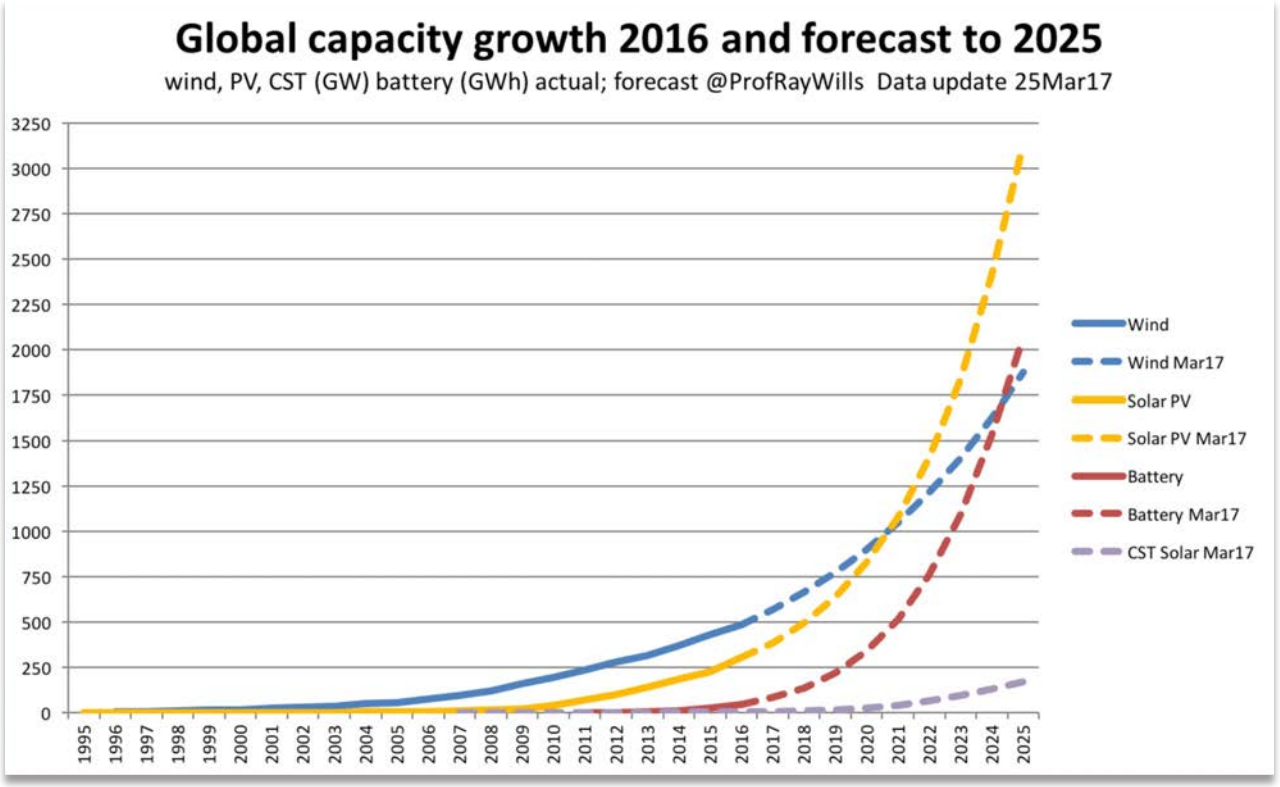
- *International Energy Agency (Oct 2020)*

"Global investors managing nearly $7 trillion (AUM) plan to almost double their spending on renewable energy infrastructure over the next five years."

- *IEA Renewable Energy Market Update (Outlook for 2020 and 2021)*

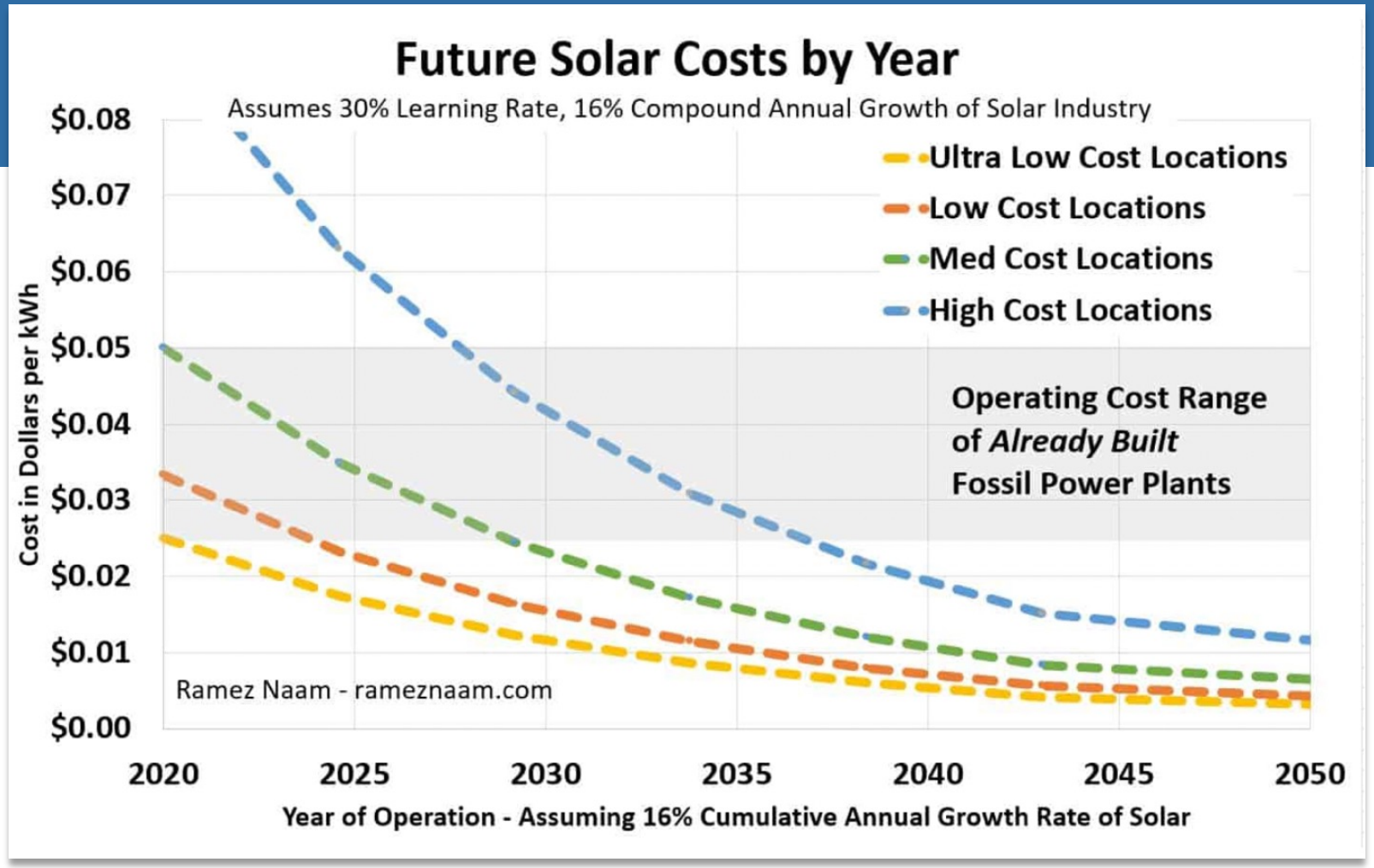
SOLAR IS THE FASTEST GROWING CLEAN ENERGY

The average cost of solar energy has decreased drastically, making it one of the most competitive sources of clean energy.



http://www.raywills.net/rtwtechadopt.html

Solar Is An Affordable Energy Source



https://www.theguardian.com/environment/2020/oct/22/us-renewable-energy-costs-savings-study-report

Conventional Solar has Limited Applications

Next-generation solar technology is needed to drive further growth in the industry

"Regardless of their composition, solar energy is poised to be a significant part of our future as society transitions away from fossil fuels. As a result, we can expect increased production of solar panels in the coming decades, and potentially, large amounts of hazardous waste to boot."

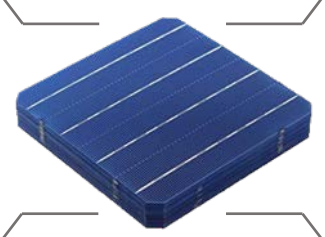
- Discover Magazine, Solar Panel Waste: The Dark Side of Clean Energy, Dec. 2020

Unattractive, Hard Form Factor

Requires Large Dedicated Footprint; Rigid, Heavy Panels

Fragile Direct Light

Sensitive to Damage; Dependent Upon Direct Sunlight

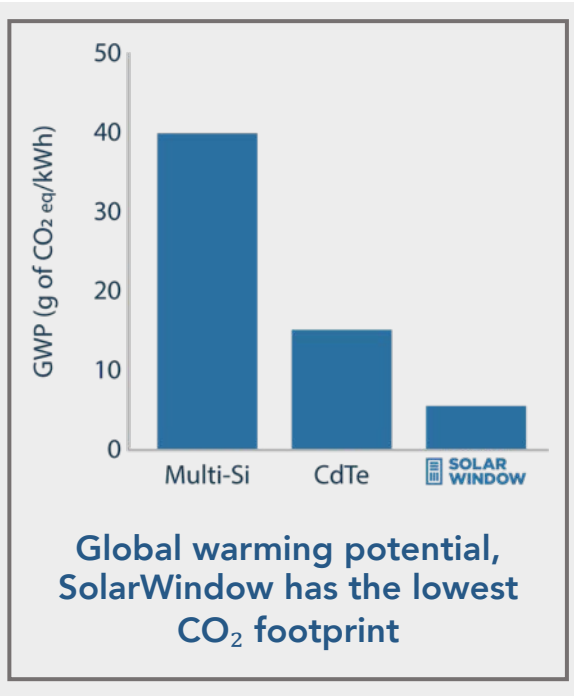


Costly Materials & Manufacturing

High Cost of Raw Materials & Manufacturing; Energy Intensive Processes

Harmful to Environment

May Rely on Toxic Heavy Metals; Difficult to Recycle



Global warming potential, SolarWindow has the lowest CO_2 footprint

LiquidElectricity™ by SolarWindow

Transform Ordinary Surfaces into Electricity Generating Products

The Solar Energy Industries Association reported that solar is an $18 billion industry. Solar currently supplies 3% of the country's electricity. It is expected to reach 20% by 2030.

By 2030, the sector would employ 600,000 people and add $345 billion to the national economy while offsetting carbon emissions by 35%.

- Forbes Magazine, Nov. 2020

Transparent, Non-Intrusive

Ultra-thin; Ultra-lightweight;
Transparent; Electricity-Generating Coatings

Wide Ranging Utility

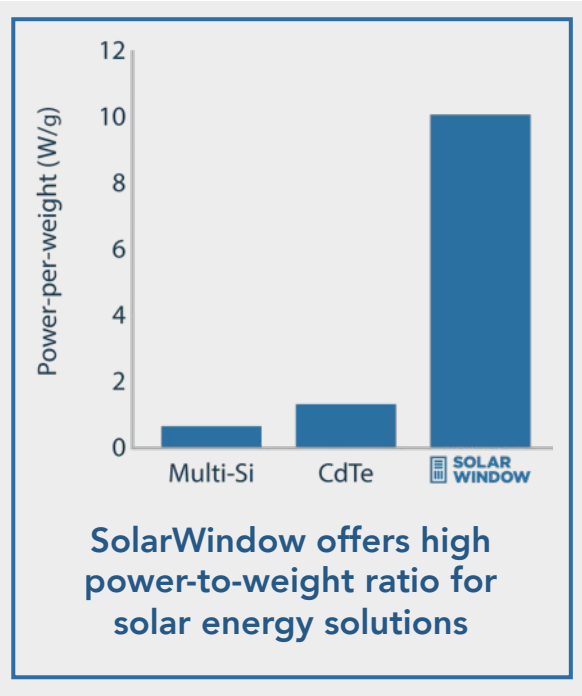
Generates Power from Sunlight,
Shaded Low-light, and Artificial Lighting;
Apply to Glass, Flexible Plastics, & Films

Ease of Manufacturing

Low-Cost Materials; Solution Processable;
Roll-To-Roll and Sheet-To-Sheet;
High Throughput Manufacturing

Good for the Environment

Earth Abundant; Safe;
Raw Organic & Inorganic Materials;
Lowest CO_2 Footprint of All Solar Energy



SolarWindow offers high power-to-weight ratio for solar energy solutions

Exponential Growth in Global Investments in Renewables

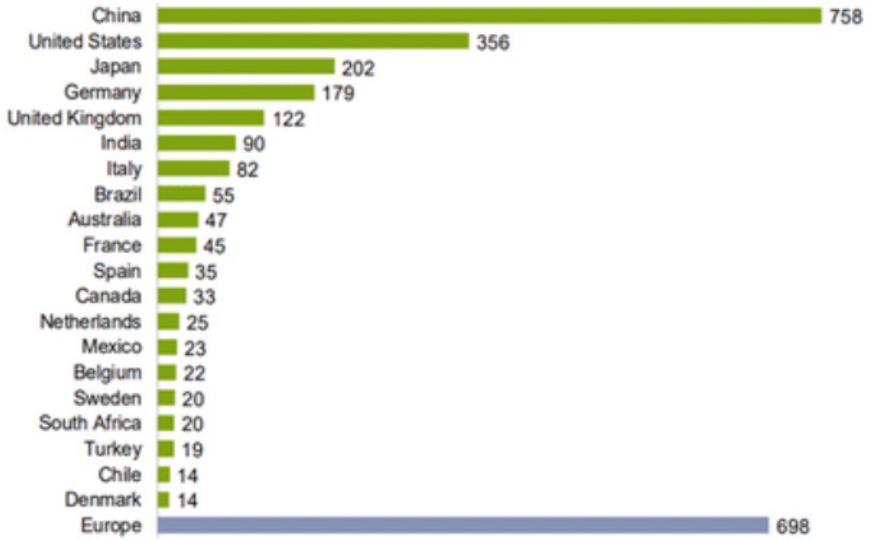
In 2019, the total new investment in renewable energy amounted to approximately $302 billion worldwide.

China, Europe and the US are top investors in renewables

https://www.statista.com/statistics/186807/worldwide-investment-in-sustainable-energy-since-2004/

https://www.researchgate.net/figure/a-Renewable-energy-capacity-investment-by-various-countries-from-2010-to-the-first-half_fig1_341203774

World Superpowers are Leading the Way



a) Renewable energy capacity investment by various countries from 2010 to the first half of 2019, in United States Dollar ($) billions; b) Global capacity in renewable power from 2004-2018 in gigawatt (GW) [2].

Market Expectations

In 2020, Global Energy Transition Investments Hit $500 Billion

THE WORLD'S MOST INFLUENTIAL COMPANIES HAVE MADE A COMMITMENT TO GO 100% RENEWABLE

https://www.there100.org/re100-members

Clean Energy Saves America $321 Billion Per Year

Renewable & Abundant

Affordable Access, Stable Energy Prices

Reduced Dependence on Imported Fuel

Economic Development, Jobs Creation

Uninterrupted Energy Supply

Clean Energy, Reduce Air Pollution

An aggressive push towards 100% renewable energy would save Americans as much as $321B in costs, while also slashing planet-heating emissions

https://www.vox.com/2018/11/24/18109883/climate-report-2018-national-assessment

The Science : LiquidElectricity™ 101

LiquidElectricity™ is an Organic Photovoltaic (OPV)

OPV is solution processable, highly tunable, low-temperature manufacturable, inexpensive, and lightweight

Further, **OPV has low material toxicity, cost, and environmental impact**

Finally, OPV can make power in a transparent state utilizing sunlight and artificial light sources

Flexible Ultra-Thin Glass Coated Using LiquidElectricity™

Tune for Power Output by Managing Color and Transparency

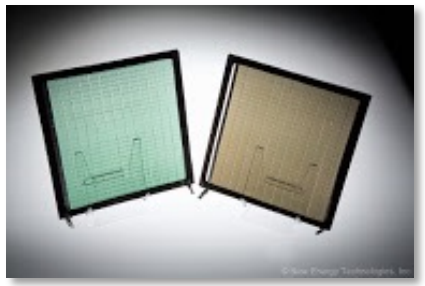
Available in Variety of Colors

Grey

Green

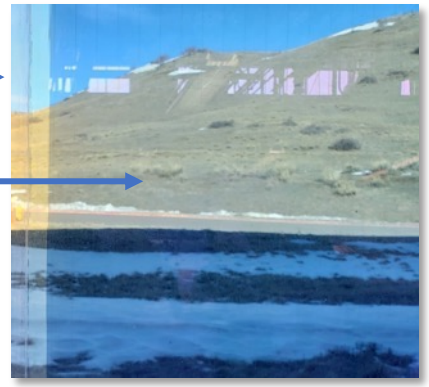
Blue

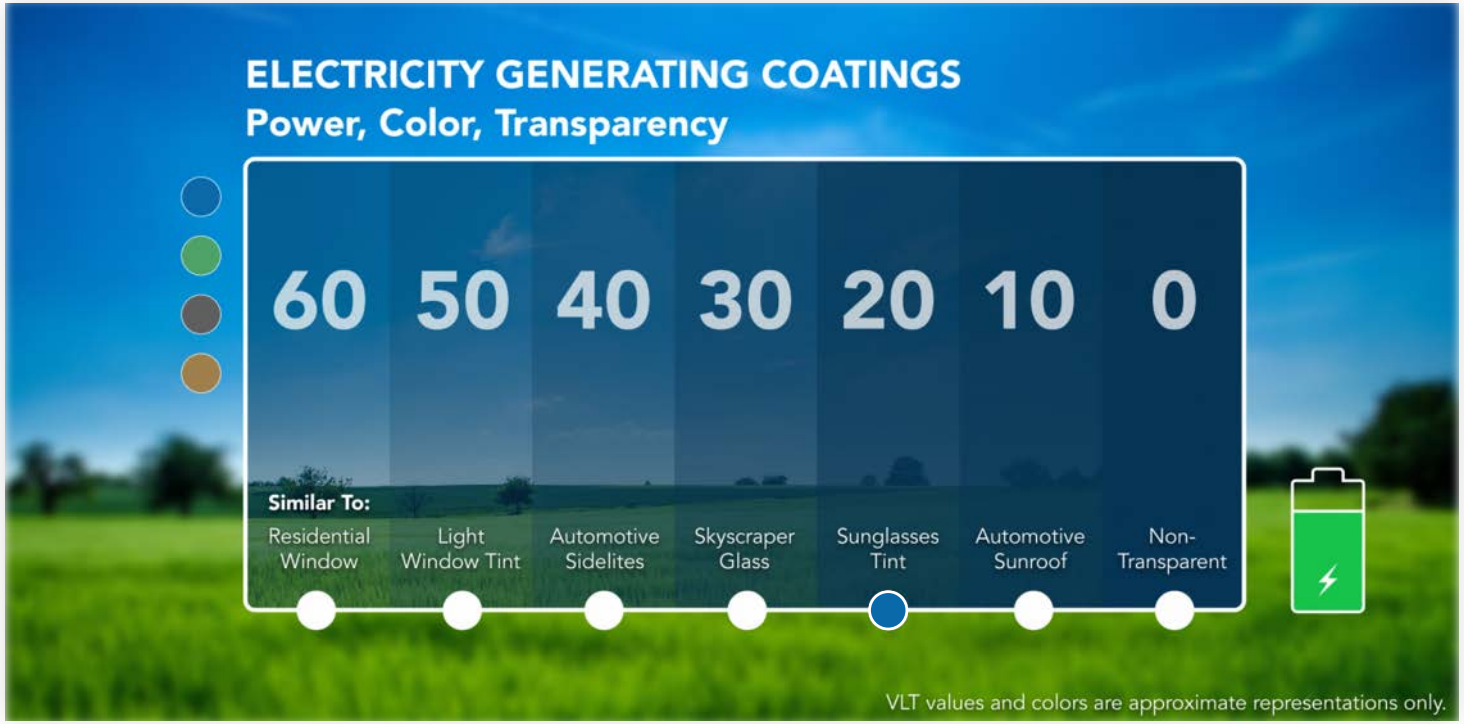
Brown



80 % VLT →

35 % VLT →





Transparency (Visible Light Transmission) Ranges from 60% to 0%. Power increases as VLT decreases.

Deep blue colors generate the greatest power output.

*Color and transparency are estimated illustrations. The actual and level of transparency will vary from actual coated devices.

LiquidElectricity™ is an Organic Photovoltaic (OPV)

Stacking Layers for Power

Our LiquidElectricity™ (coatings and application processes) generates electricity on glass, flexible plastics, and films.

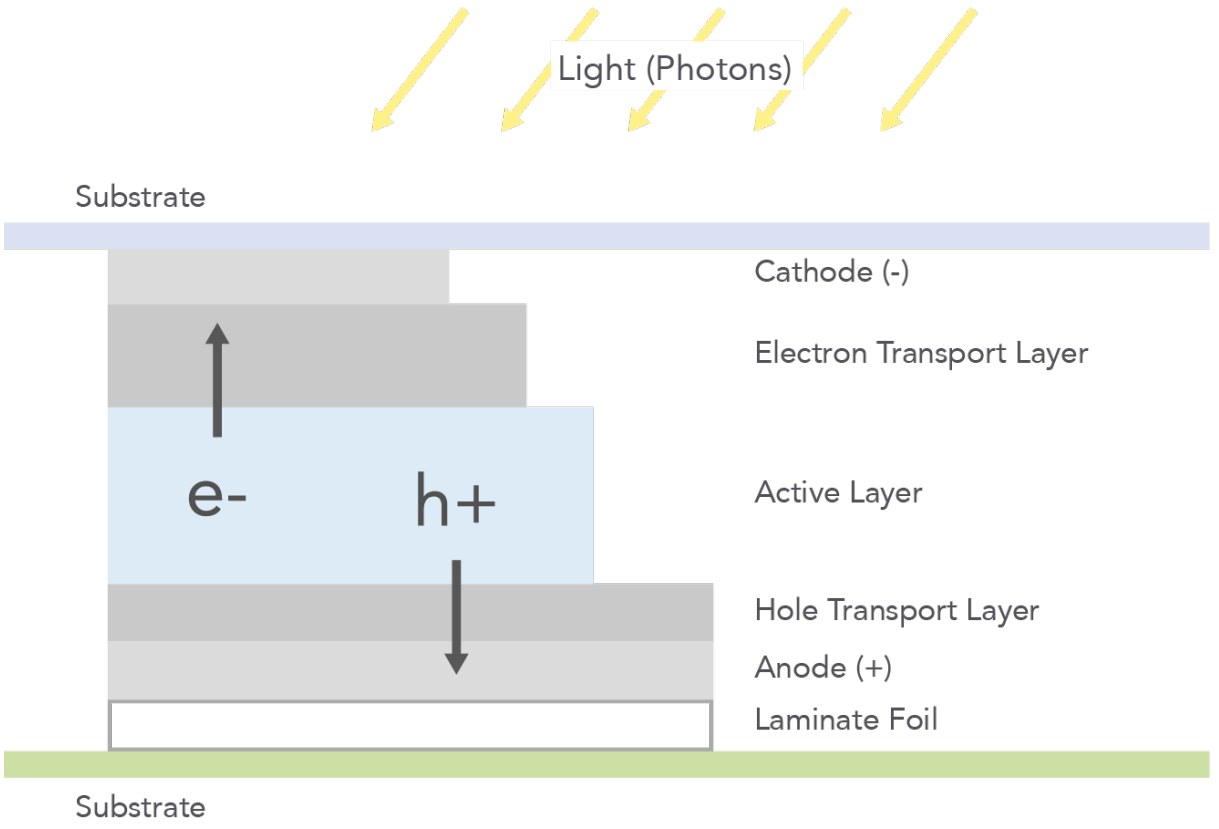
First, LiquidElectricity™ is customized for color and transparency based on the specific application, and then applied in layers to a substrate (glass, plastic, or film).

Next, light hits LiquidElectricity™, generating holes (+) which are positively charged, and electrons which are negatively charged (-).

Holes (+) and electrons (-) are attracted to the hole/electron transport layers, where they migrate through to the conductive layers known as 'anode' and 'cathode'.

Holes (+) move to the anode and electrons (-) move to the cathode.

Positive and negative charges are directed to their respective conductors, and an electrical circuit is generated, resulting in the flow of electricity.



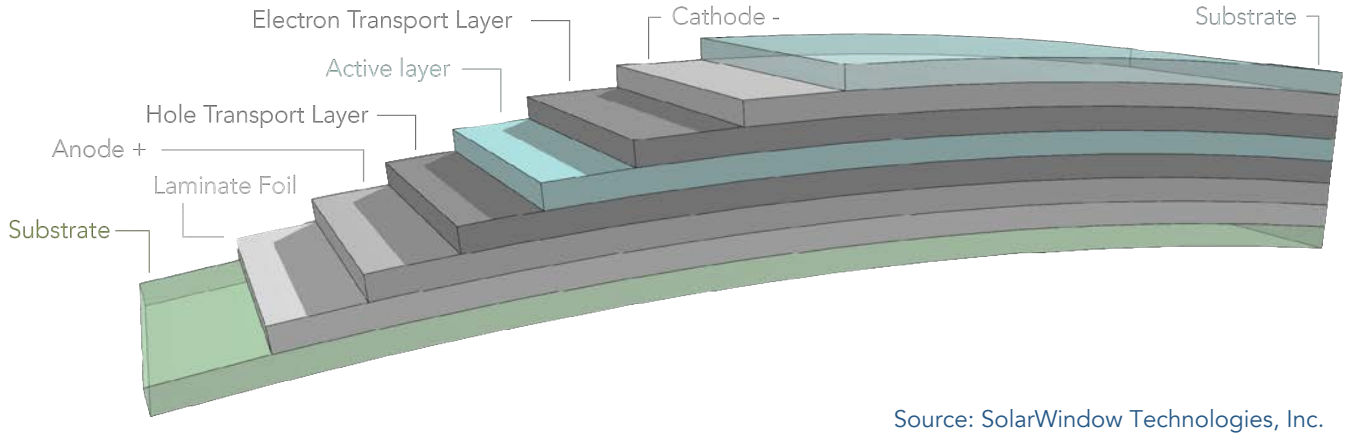
Our Coatings Come to Life

TRANSFERRING ELECTRICITY FROM GLASS TO MAKE IT USABLE

(+) (-)
Currents & Circuits

Extremely flat transparent conductive oxide (TCO) wires are used to remove positive and negative currents from electrical circuits. These wires are wide enough to transfer power to thicker, more visible wires called bus bars, and subsequently onto copper wires in plastic housing.

Two wires are always part of each of our systems: one negative and one positive. When connected, power will flow to all power-using devices.



Source: SolarWindow Technologies, Inc.

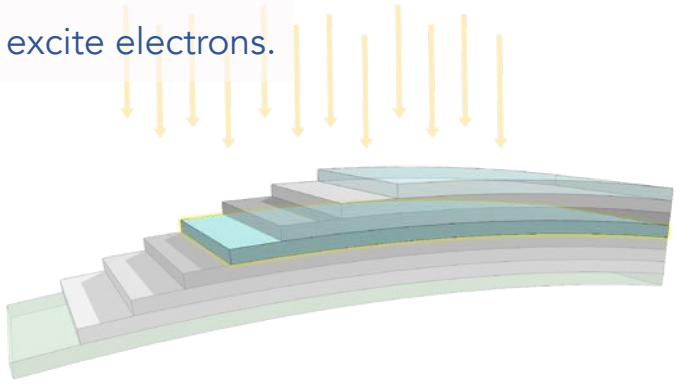
How LiquidElectricity™ Comes to Life

1. Light Energy is Collected

Light energy activates coatings.

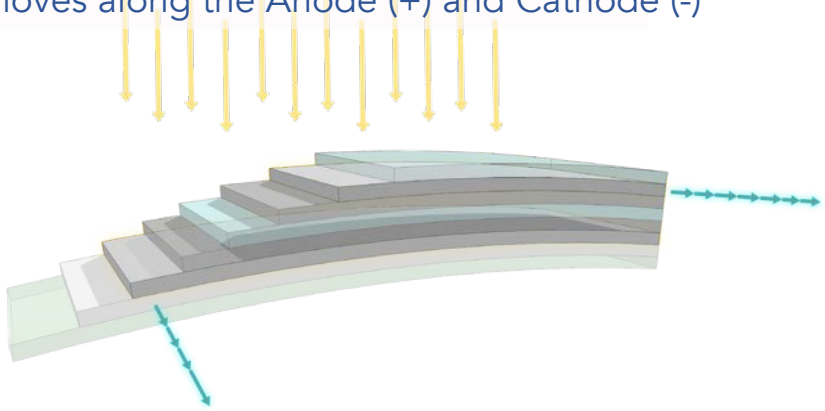
2. LiquidElectricity™ Comes to Life

Layers of light activated coatings excite electrons.



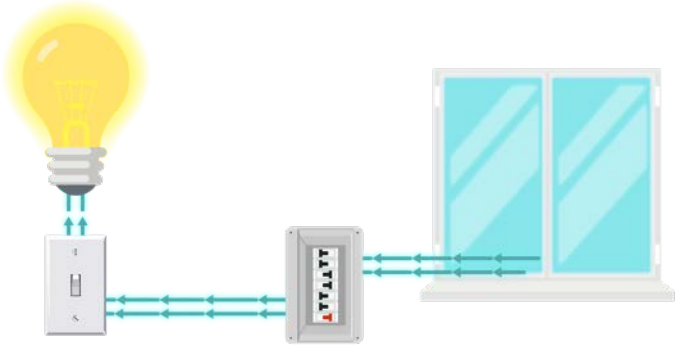
3. Electrons begin to flow

Electrons moves along the Anode (+) and Cathode (-)



3. Electricity is Generated

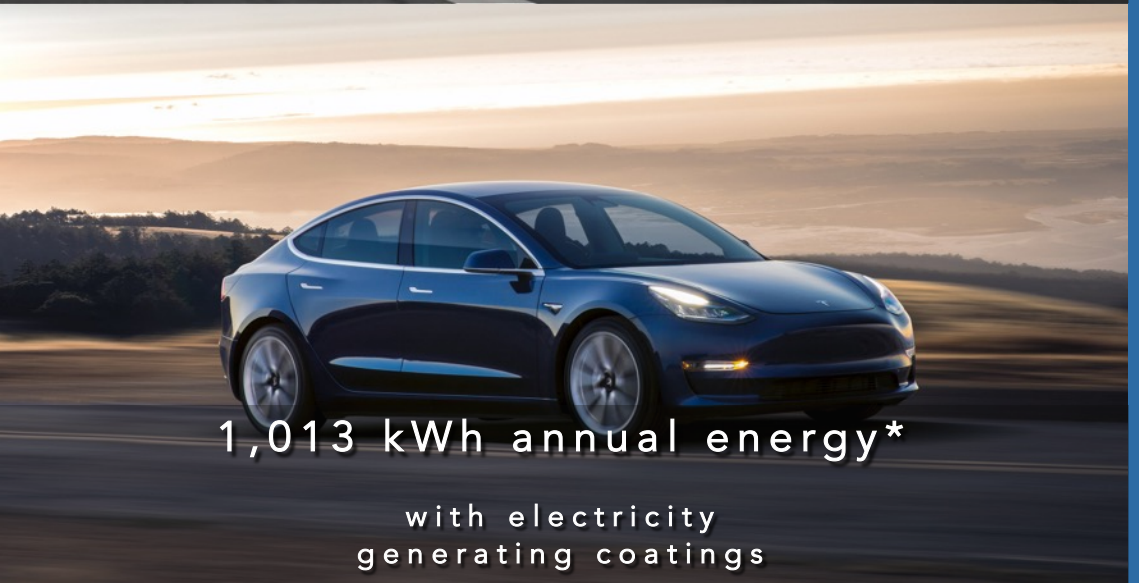
Electricity is generated and flows to power devices.



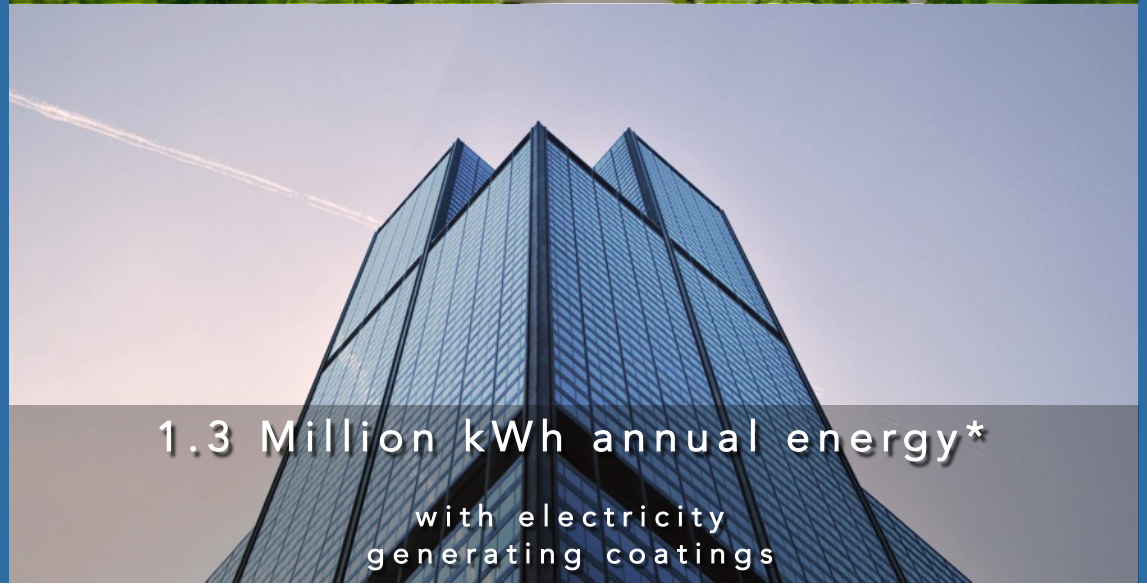
Diverse Applications

COMMERCIAL

AGRIVOLTAIC



AUTOMOTIVE



ARCHITECTURAL

*These statements are based on the Company's independently validated Power Production Modeling.

THE SOLARWINDOW PROMISE

Economic and Environmental Benefits

Clean Energy

Lower Greenhouse Gasses and Harmful Emissions

Eco-Friendly

Positive Impact on Climate Change & Global Warming

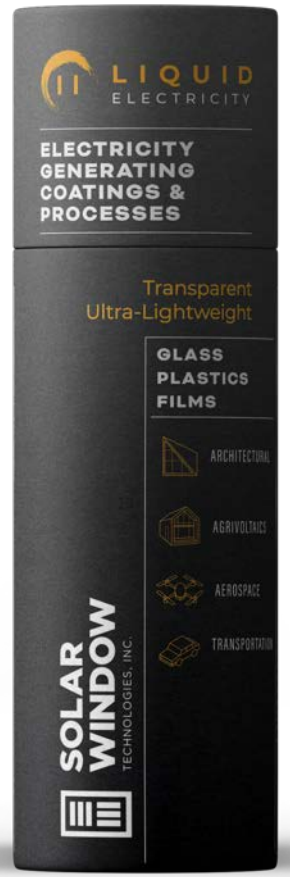
Viability

Increased Economic Growth with Sustainable Energy Prices

SOLARWINDOW'S COMMITMENT TO SUSTAINABLE DEVELOPMENT

Engineer, design, and deliver LiquidElectricity™ products which reward customers with affordable clean energy for a healthier, safer, and more sustainable planet.

Based on power and financial modeling with SolarWindow installed on a 50-story building.



A Next Generation Solar Solution

Revolutionizing the World's Energy Sector

bringing
LIQUID
ELECTRICITY
to life

Innovation. Powered by **SolarWindow**.

WE INVITE YOU TO BECOME A PART OF THE INVISIBLE ENERGY REVOLUTION.

Thank You

For further information:

SolarWindow Technologies, Inc.

E: info@solarwindow.com
P: +1 800-213-0689

Symbol: WNDW

SolarWindow Corporate Offices
430 Park Avenue, Suite 702
New York, NY 10022

SolarWindow Operations
A-1022 10F
338, Gwanggyo Jungang-ro
Suji-gu, Yongin-si
Gyeonggi-do, Republic of Korea

SOLAR WINDOW
TECHNOLOGIES, INC.