
SOLAR X WORKS
AN APPLIED SOLAR COMPANY
Just one of our applications: the xCold @ a 5K run in central Washington State
Cooling down runners and keeping water chilled

WELCOME TO SOLAR X WORKS

Join us on this journey through ***our*** solar system as we tell you a story worth reading. Let's start with the three pillars of value:

In many cases, our discussions come down to three basic questions. How does your SolarX Works solution:

1. Decrease operating costs
2. Improve access to reliable power
3. Increase the potential for revenue

Well … Let us tell you a story. Perhaps you can help us come up with an ending.

WHO WE ARE AND WHAT WE DO

We are an applied solar company headquartered in Washington State. We are striving to improve the human condition through the creative application of sustainable technologies.

What the heck is applied solar?

As an applied solar company we focus on localized, real world solutions which improve the quality of life for Earth's citizens. We simply believe the time has come for solar energy to deliver on its promise. With that, we are looking to leverage the best that the solar industry has to offer to help solve real and immediate societal challenges across the globe.

THE HUMAN EXPERIENCE

Stable Food Supply

Clean Air & Water

Health & Wellness

Warmth & Cooling

Education

Telecommunications

Enabled by Energy

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ENABLED BY ENERGY

According to the UN … the following are among our most basic human needs:

- A safe and stable food supply that meets the needs of a population and provides the possibility of economic growth.
- Clean air and water for health, wellness and sustainability.
- Protection from harsh environmental conditions.
- Health and wellbeing to maintain a sustainable culture
- A safe and secure environment in which to learn and grow
- And the ability to connect with others to disseminate knowledge and facilitate communication

And these are all further enabled by cheap and reliable energy.

GLOBAL CHALLENGES

3 Million
According to NCFH, there are more than 3 million farmworkers in the US.

2 Billion
Globally, nearly two billion people have no access to reliable electricity.

70%
Studies show that the world can anticipate a 70% increase in food demand by 2050.

60%
The EIA projects a 60% increase in electricity prices in the US from 2016 – 2035.

1.3 Billion
The world tosses out (or loses) almost 1.3 billion pounds of food each year.

50%
In developing countries, up to 50% of post-harvest perishable foods are lost due to poor infrastructure!

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GLOBAL CHALLENGES

As we think about meeting the challenge of a sustainable Cold Chain, helping to improve post harvest yield through applied solar technologies and enabling businesses... we believe a temperature-controlled environment, when combined with renewable solutions, can provide a key to meeting the world's demand for a safe, consistent, available food supply. And this seems like a big deal!

"As the world's population moves toward 9.5 Billion … meeting future demand for food… will present significant challenges!" - *Institute of Mechanical Engineers*

INTRODUCING THE XCOLD™

A highly efficient solar-powered refrigeration platform capable of harnessing the sun to produce temperatures below 32° F (0° Celsius).

The xCOLD ™ can be power-source agnostic (solar, shore-power, generator, battery).

Our unit can be deployed in minutes.

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FROM IDEA TO PROTOTYPE

Pilot: Can we use the sun to make things cold?

Proof of Concept: Can we do that even better?

Easy Setup

Kick-stand panel frame, AC unit and tent assembly – 30 minutes

Cold Air

20° temperature drop from ambient within twenty minutes.

Great Outcome

Our field test have exceeded expectations

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THE CONCEPT

Power + Change in Focus = Improved Lives

We realize it takes more than good intentions to build a sustainable business. We are focused on creating an economically viable and profitable company. We understand that corporate responsibility must be underwritten by strong financial results.

Attempting to engage in a wide variety of opportunities can result in lost focus and a failed startup. We have limited ourselves to just a few commercial products which leverage our Minimum Viable Product (MVP) the SXW Control System. The first is what we characterize as the DC Cooling system… our patent pending SXW xCOLD Platform. Through thoughtful design and smart software our cooling system uses direct current (DC) straight from a power source such as (in this case) solar panels (although other power sources could also be used) to create a cold atmosphere that can be applied throughout many different use cases.

THE CONCEPT

Smart Controls

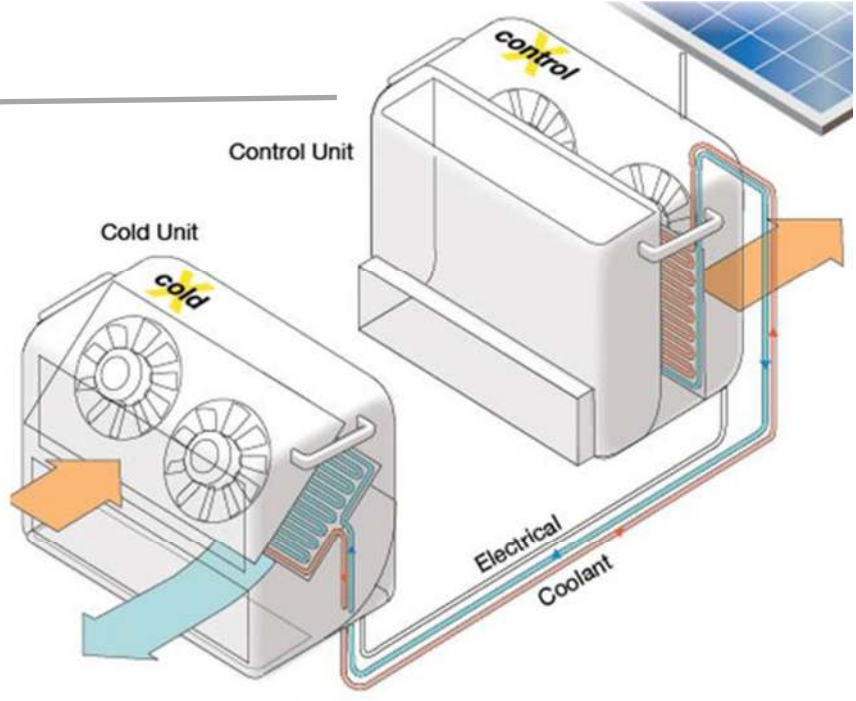
xFlow ™ technology –remote controls for failover & efficient power management.

Off-grid Go remote

Designed to be installed off-grid. Our solution can also be grid-augmented.

25% More efficient

Than a conventional alternating current (AC) unit connected to solar.



Remote

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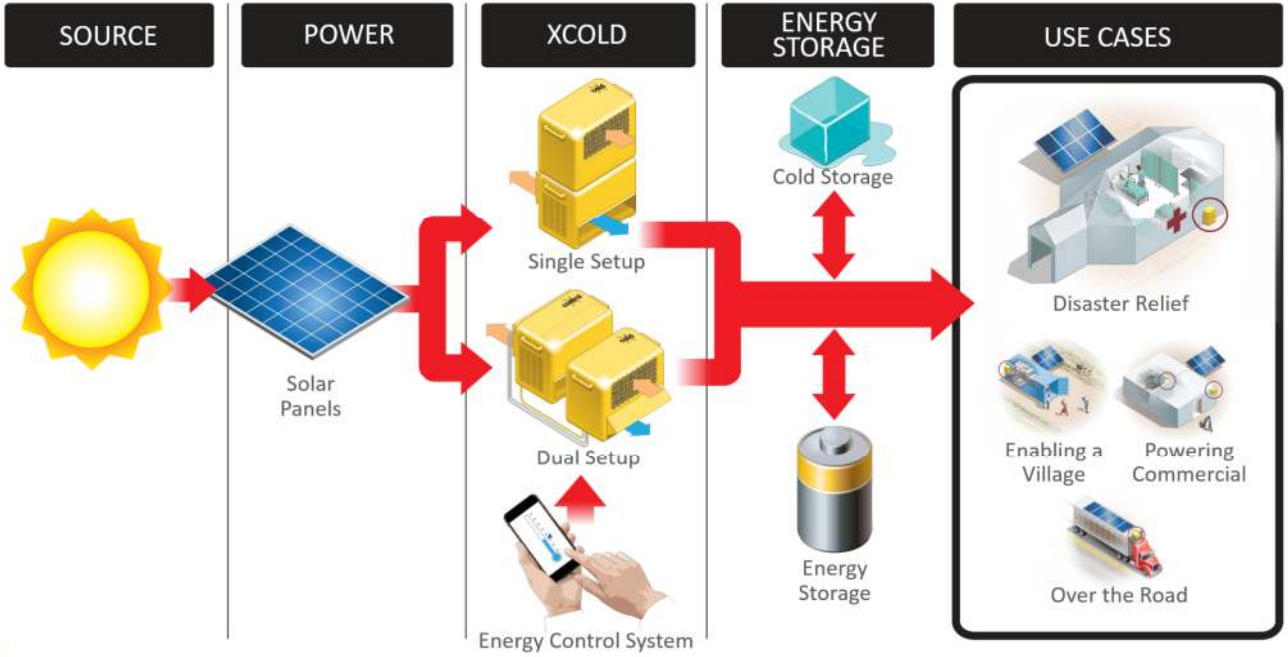
OUR HEARTBEAT IS THE SUN

The sun is our enabler. We provide the control system to harness its energy. We leverage thermal mass and / or batteries to store its energy. And we are able to deliver that energy to meet a multitude of needs.

Put simply we harvest energy from the sun in the form of direct current (DC) power, apply a little proprietary technology and use that to support several use cases including disaster relief, village enablement, industrial uses, oxygen and water purification, and cold storage.

With all that said our current focus area is the xCold™ modular cooling unit.

OUR HEARTBEAT IS THE SUN



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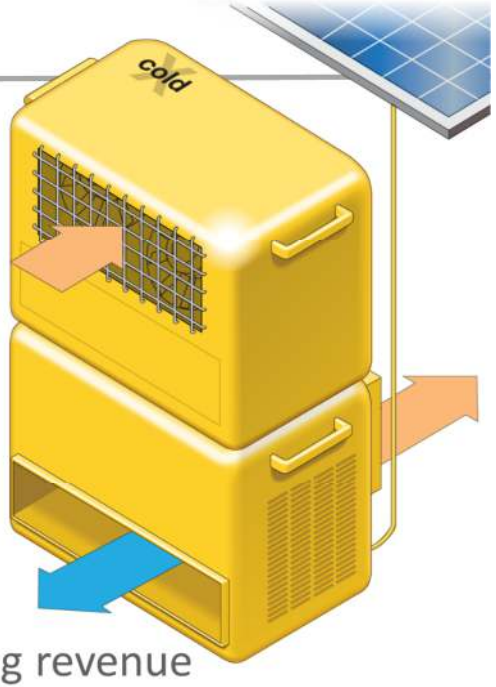
THE XCOLD™



SolarX Works xCOLD:

An efficient, cost-effective platform which harnesses the sun to make stuff cold.

With a focus on:

Decreasing costs | Improving access | Increasing revenue

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SOLARXWORKS IS FAB-ULOUS

F

FEATURES

Our systems feature:

• Modular designs • Both off-grid and grid-augmented solutions • DC power flow
• Smart control systems • Remote monitoring • Higher efficiency output • 24,000 BTUs of cooling for xCOLD

A

ADVANTAGES

Partnering with us provides several advantages:

• Access to engineering resources to support your solutions • Modular designs mean easy setup and easy operations • Energy-efficiency / cheaper per BTU to operate

B

BENEFITS

How does a SolarX solution benefit you?

• Reduced power / fuel costs • Reduced cost of deployment relative to other solutions • Enables access to locations that would otherwise be difficult or too costly to deploy solutions • Fewer visits to refuel generators
• Embedded solutions for workers or crops to improve productivity

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SOLARXWORKS IS FAB-ULOUS

All the great features in the world don't matter if there is not some form of benefit for *you and those you represent*!

All the articulated advantages are just words on a page if we cannot describe your WIIFY (what is in it for you).

Do you have a remote site that you have to power with a generator? We can offset the cost of fuel, the potential overhead incurred by driving out to maintain that site.

SOLARXWORKS IS FAB-ULOUS

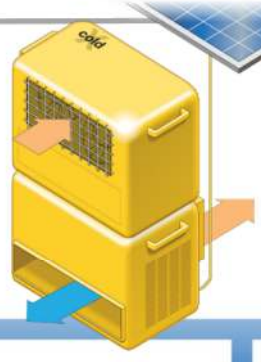
Do you have an issue with heat-exposure for your laborers? We can reduce the risk to them and to you (both reputational and financial) by providing an off-grid (and mobile) place for them to cool down. Did you know that in the State of California every individual incident of heat-related injury for a farmworker could carry with it a $6000 fine. Imagine 150 farmworkers in a field when it is 112 degrees out. It does not take many $6000 fines to cover the cost of a single xCOLD™ unit.

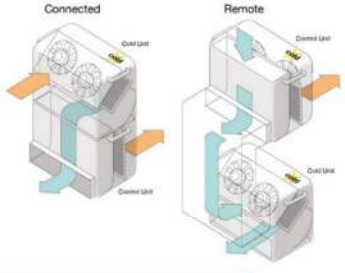
Is post harvest waste an issue? Perhaps you are a food producer and for every two carrots harvested one gets thrown away because of a lack of accessible refrigerated space. That translates to real revenue. Our solutions can help you recapture that lost income.

JUST SOME OF OUR USE CASES

Our Use Cases

Leveraging the best that the Solar industry has to offer to solve real and immediate challenges across the globe.





1 Over the Road

Mount the xCOLD system to your trailer or truck and mount panels on the roof.

2 Enabling a Village

Connect the xCOLD system to a solar array and a space you want to keep cold.

3 Cooling Commercial

The xCOLD can be used independently to offset power costs

4 Anywhere Remote

Reliable power can be unavailable for many reasons. We can meet that challenge.

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A Village Empowered

We believe temperature-controlled solutions when combined with renewable solutions can provide a key to meeting the world's demand for a safe, consistent, available food supply. And this seems like a big deal!

50%

In developing countries, up to 50% of post harvest perishable foods are lost due to poor infrastructure.

Did you know 25% of the earth's population does not have access to electricity and a greater number had no access to reliable power. That is close to two billion people without power.

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Industrial A bigger box

Did you know that energy efficiency is one of the top sustainability priorities for supermarkets, according to a recent Retail Industry Leaders Association Sustainability Report?

We designed xCOLD with the capability to produce 24,000(+) BTUs of cooling, which is what an average 40' container requires. However, we wanted to create a system that could be used for a variety of different spaces. The xCOLD can be used independently or in a serial configuration to offset peak power costs for industrial cooling.

62%

Up to 62% of energy consumption in US-based super markets is associated with refrigeration. ENERGY STAR estimates that $1 in energy savings is equivalent to increasing sales by $59!

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Off-grid

Just in case

There are situations that require an innovative approach to power and cooling delivery:

- To keep medicine cool after a natural disaster,
- To provide off-grid temperature-controlled storage or shelter for disaster-relief supplies. workers, or forward bases,
- And, other emergency situations.

The xCOLD is designed to work fully off-grid by leveraging back-up solutions and redundancies.

376

There were 376 recorded significant natural disasters worldwide in 2015. These events had a combined $70 Billion impact.

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OUR SEPCIFICATIONS

FUNCTION	UNIT	SPEC	UNIIT	SPEC2
Ambient Dry Bulb temperature	(°F)	95	(°C)	35
Ambient Wet Bulb Temperature	(°F)	65	(°C)	18.3
Functional Lowest Temperature Achieved	(°F)	31	(°C)	-0.6
Nominal Cooling Capacity	BTU/h	24,000	BTU/h	24,000
Refrigerant	(-)	R-134a	(-)	R-134a
Evaporator airflow	(CFM)	800	(CM/HR)	1359
Evaporator air inlet DB temperature	(°F)	80	(°C)	26.6
Evaporator air discharge DB temperature	(°F)	63	(°C)	17.2
Evaporator refrigerant inlet temperature	(°F)	39	(°C)	3.9
Evaporator refrigerant discharge temperature	(°F)	73.4	(°C)	23
Evaporating pressure	(PSIA)	49	(PSIA)	49
Evaporator refrigerant mass flow rate	(lbm/hr)	294	(lbm/hr)	294
Condenser airflow	(CFM)	1400	(CM/HR)	2378
Condenser air inlet temperature	(°F)	95	(°C)	35
Condenser air discharge temperature	(°F)	113	(°C)	45
Condenser inlet temperature	(°F)	216	(°C)	102
Condenser discharge temperature	(°F)	102	(°C)	38.9
Evaporator flex line length	(Ft)	20	(M)	6.1
Max height , depth, width	(in)	60 X 18 X 42	(CM)	152.4 X 45.7 X 106.7

OUR PRICE/UNIT

Join us on our journey! Participate in our beta program to get hands on support and purchase the xCOLD™ at a reduced beta program price.

You will be an important part of delivering this much needed solution throughout the world.

We need your help as we seek to refine and improve our solutions for use.

Would you prefer to invest with us to bring the world a sustainable cold chain? Call +1.509.989.6866

What	How Many	How Much
SolarX Works xCOLD	1	$33,000*
12 Hour Battery Array	1	$12,540*

* Does not include shipping, handling or tax.
* Does not include solar panels or container. SolarX|Works can provide both (what we call the balance of system).
* The SolarX|Works control system is designed to prioritize the source and distribution of power. We understand that night falls, clouds roll in, and you still need to maintain temperature. One solution to control the "what-ifs" is a SolarX Battery Array.

SOLAR X WORKS

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