

I'm Not a Fan of Green...

If you've read anything by me in the past, you know I'm not a big fan of the green movement being pushed by nations and other global organizations.

Personally I don't think that governments, populated with hordes of non-experts, should be trying to determine the course of economic development. It didn't work for Chairman Mao in the 50s. And it won't work today.

An industry that is largely or wholly dependent on government handouts isn't an industry you want to put your hard earned money into. Here's just one example of what I'm talking about.

California implemented a new policy in April of 2023 that reduced the amount of incentives available to homeowners who were thinking about installing solar systems. Since that policy was enacted, the sales of rooftop solar systems have plummeted 85%!

Bloomberg reports the California Solar & Storage Association has found about 63% of its 400 solar installer members have reported cash flow issues because the new policy crushed consumer demand.¹

In San Diego alone over 25 solar companies had gone out of business or relocated.²

You don't have to be a financial genius to understand that an industry that is so dependent on government giveaways is a lousy investment.

So I'm not a fan of the green movement as it's being sold.

But I **am** a pragmatist.

And whatever can, **on its own**, make an industry more efficient and more profitable — including the energy industry — should definitely be considered for your portfolio.

The fact that I've repeatedly said a fully renewable future isn't ready for prime time, doesn't mean that there aren't companies out there making serious contributions to the energy landscape.

1

<https://www.zerohedge.com/markets/worried-about-next-two-months-solar-firms-running-out-cash-california>

2

<https://www.zerohedge.com/markets/worried-about-next-two-months-solar-firms-running-out-cash-california>

I've come across a small-cap company that seems to buck the renewable trend in every conceivable way. I'd like to call it a start up but they've been in business for ten years already! And on top of that feat of endurance, they've been **profitable** to boot!

That's the kind of company I notice when examining any industry, not just renewables.

The company's name is **SolarBank (OTCQX: SUUNF/CSE: SUNN)** and it's led by what I can only call a **visionary** management team — both in terms of their approach to the solar industry as well as the way they built and manage the company.

They're a developer, owner, and operator of distributed solar power plants across North America (Canada and the US). I'm going to tell you all about them in this report. But before I do, I need to make sure you understand a little about the energy industry in general and the solar industry specifically so you can really appreciate what this company has to offer.

Let's jump in.

Mega-Whats?!

First let's get an understanding of the basics of the electricity business.

All energy is measured in something called a "watt."



A single watt isn't a lot of power. An average lightbulb requires 60 watts to light up. Multiply that times all the lights and electronics and appliances in your house and you've got a lot of watts. Multiply that times the homes and businesses in your neighborhood and state and you've got a helluva lot of watts.

When you're talking about big numbers like these they're referred to as kilowatts (kW) which is 1,000 watts and megawatts (mW) which is 1000 kW. Stepping up from there, a gigawatt is 1,000 megawatts and a terawatt is 1,000 gigawatts. These are the numbers we talk about when we talk about power that is required to keep an entire city or state worth of light bulbs, and appliances, and computers and air conditioners and on and on running continuously.

Now, power plants are generally referred to by how much power they can produce in absolute terms — for example, a 750 mW power plant. (That's called a "nameplate" rating.)

However, energy is **consumed** differently.

Let's go back to our 60 watt light bulb. It takes 60 watts to power it. But for it to shine for 5 hours, it would take 300 **watt-hours** of power (60 x 5). So a watt is a measure of instantaneous power while watt-hours measures the amount of **power consumed** over a period of time and is the more relevant number to be concerned with.

Now let's put these two concepts together.

Say you have some power source that is capable of producing 100 megawatts (mW) of power when it's running at full capacity. No power plant runs at full capacity all the time. If you're talking about a fossil fuel-driven plant, there are times when the plant will be shut down for maintenance. Similarly, a solar plant can't generate power at night. (This is one of the big objections/hurdles to renewable alternatives.) Then there are other times when power production from one source may be reduced if other cheaper power sources can supplement it.

How much power a power plant produces over a period of time — the times when it's running at full capacity and the times when it's dialed back — is known as its **average production**. And a power source's average production as related to its full capacity is known as its **capacity factor**. (If you have a nuclear plant that is capable of producing 1,000 mW per year at full capacity and over the course of a year it produces 850 mW it has an 85% capacity factor.) A power source's capacity factor gives you a realistic representation of how much power that source can provide.

Finally there's another measurement you should understand known as **load factor**. The load factor is calculated by dividing the average load consumed in an area by the peak load over a period of time. This is how much energy is used to power an area. So for example, let's say a community consumed an average of 2,000 mW over the course of a year and during that same period peak consumption was 5,000 mW — its load factor would be 40%.

A lower load factor means **more variation** in the energy needs of an area — something you'd see in a residential area — while a higher number means more consistent demand, something you'd expect from an industrial customer.

These are the measures that are used to determine the energy needs of a particular region.

Now let's put all this in some context.

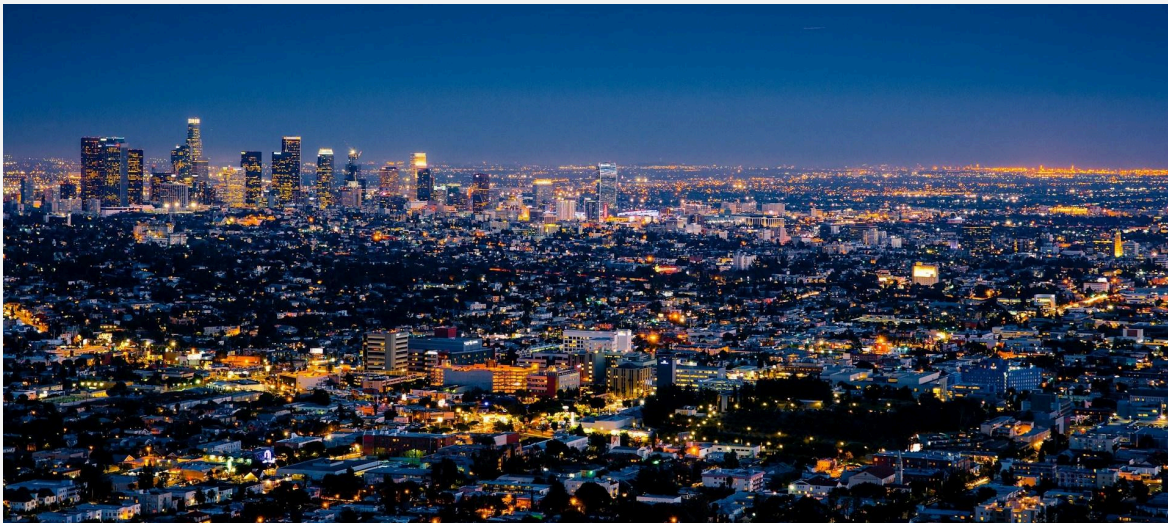
Powering a specific region is a complicated problem because the power needs of areas throughout the country can vary widely. For instance,

*According to the U.S. Department of Energy, the **average annual electricity consumption for a U.S. residential utility customer was 10,649 kilowatt hours (kWh) (or 10.6 mWh) in 2019.***³

That's an average of 887 kWh consumption per household, per month.

But looking at those needs from region to region, demands are very different. For instance, households in Vermont consume on average 567 kWh per month while those in New Hampshire consume 630 kWh. Head a little further south and west and you get some bigger numbers. Georgians consume 1,081 kWh per month while Louisiana tops the list consuming 1,201 kWh per household.⁴

Then when you look at bigger regions, like an entire state, demands change yet again. In 2021 the state of Texas was the largest consumer of electricity consuming over 36,000 GIGAWATT hours (that's 36 million mWh) per month!⁵



Florida, another southern state, used just over 20,000 gWh per month while Louisiana averaged 7,500 gWh per month.

³ <https://electricalengineeringx.com/the-advantages-and-disadvantages-of-solar-energy/>

⁴

<https://www.chooseenergy.com/news/article/the-states-that-use-the-most-and-least-amount-of-energy-per-household/>

⁵ <https://www.statista.com/statistics/560913/us-retail-electricity-consumption-by-major-state/>

If all this has you a little confused, don't be. All you need to understand are the kinds of numbers that it takes to power something ranging from a small neighborhood in New Hampshire all the way to an entire state like Texas or Florida.

Now let's see what kind of power on average solar can produce.

For a solar installation to be considered "utility-scale" it has to produce a minimum of 1 mW of power. But that's the minimum. According to Berkeley Lab...

At the end of 2020, there were 969 utility-scale PV (and in some cases, PV plus battery) projects totaling 38,745 MWAC operating across 43 of the 50 United States.⁶

These installations vary widely in terms of their maximum (nameplate) power rating but for the sake of simplicity, using these data let's say the average installation can produce 40mW of power. That means over the course of a month, one installation can generate a little over 29,000 mWh of power.

But...

Remember, we can't go strictly by the nameplate rating of an installation. We have to consider the **capacity factor** of solar. Again, looking at broad averages, solar has a capacity factor of between 10% and 25%.⁷ Again for simplicity's sake, if we split the difference and use a 17% capacity factor, then an average 40mW solar installation can only generate 4,900 mWh of power per month.

Which means a 40mW solar array might be able to power a small community in Georgia. But would be sorely lacking for someplace like the city of Austin, TX.

So strictly from a power generation perspective, solar, by itself, is still lacking. But the story doesn't end here...

Understanding the Grid

We need to consider how energy gets from point A (the power plant) to point B (you). That mechanism is what you probably know as the "grid." And it adds another dynamic to the equation.

The "grid" is a collection of regulated and deregulated, wholesale and retail markets that are run by utility companies, independent system operators (ISOs) and regional transmission

⁶ https://eta-publications.lbl.gov/sites/default/files/utility-scale_solar_2021_technical_brief.pdf

⁷ <https://www.whatnextnow.com/home/solar/what-is-capacity-factor-and-how-does-solar-energy-compare>

organizations (RTSs). An in depth discussion would add 50 pages to this report and you wouldn't be any better off understanding what you need to know.

Instead, here is what you **do** need to know.



There are three major power grids that connect the United States. The organizations (utility companies or independent organizations) that operate their respective sections of the grid are responsible for *the generation, transmission and distribution* of electric power.

What's important to understand is that whoever sends you your monthly electricity bill — the organization that provides you with your power — gets that power from **multiple sources** and delivers it according to its customers needs.

Now every grid operator employs three levels of power generation.

The first level is what's called **baseload power**. These are the biggest power plants that are always running. They are responsible for providing the minimum level of energy that is needed for the area they power all the time and can take hours to days to power up. But once they are, they provide reliable, affordable energy. Baseload power sources include nuclear and coal plants.

Now baseload provides the bottom line. But energy needs fluctuate on a regular basis and increases may not be able to be met by the baseload provider. As demands change, **peaking or dispatchable power** plants come into play.

These are power plants that can be fired up quickly to meet any increased needs in a specific area. Typically these are natural gas plants.

Finally there are what's known as **intermittent power** generation sources. Like their name implies, they are only available when their energy source is powering them. Solar is one of these. And while they currently can't serve the function of a baseload or dispatchable power source, they **can** be added to the mix when they're available.

Each of these sources has a different cost associated with producing 1 mWh of energy. And grid operators are **constantly evaluating** how much of what energy source they can use to meet the energy demands of the areas they serve.

The way they determine the correct "mix" of energy from their power portfolio is based on demand. Every grid operator sets their energy stack according to something called a "merit order." Let's look at another very basic example.

Say you're a grid operation and you have 10mW of solar that costs \$1/mWh to produce, 50 mW of nuclear that costs \$2/mWh, 25 mWh of gas that costs \$3/mWh and a peaking source that costs \$4/mWh. These sources are arranged from cheapest to most expensive.

Now let's say the area that we're providing electricity to is currently using 70mW of power. You as a grid operator could meet that need by using the 10mW of solar, 50mW of nuclear, and 10mW of gas.

The price for the hour will be set by the marginal cost (the cost of using one more unit) which in this case would be the cost \$3 per mWh of gas. As demand increases, more (and more costly) resources have to be added to the mix which is why energy prices are higher during peak times. Conversely as power demand declines, so does the overall cost.

And therein lies solar's biggest advantage.

U.S. Department of Energy's Solar Energy Technologies Office (SETO):

In 2020, large utility-scale systems produced electricity at a levelized (life-cycle) cost below 5¢/kWh in locations with average sunlight, and as low as 3.5¢/kWh in the sunniest parts of the country, making it one of the least expensive forms of new electricity generation.⁸ (excluding ITCs or other incentives.)

⁸ <https://www.energy.gov/eere/solar/articles/2030-solar-cost-targets>

In 2023, The Hill reported:

Overall, the median cost for coal-fired plants is \$36 per megawatt-hour, compared to \$24 per megawatt-hour for new solar.⁹

(That calculates to 3.6¢ per kWh for coal and 2.4¢ per kWh for solar.)

Utility-scale solar is one of ***the cheapest sources of power*** in any grid operator's energy portfolio. The more solar they can add to their energy mix, especially during the daytime hours when demand is always highest, the more they can lower their energy costs.



Now... let me emphasize this, these are ***extremely simplified*** explanations. There are tons of factors that go into determining the mix of energy at any given time and the cost of delivering that energy. For example S&P Global Market Intelligence noted that solar capacity factors can change from month to month...

The US utility-scale solar generation fleet averaged a 24.2% capacity factor from January through December 2022, slightly down from 2021 levels. Performance peaked in June, with the weighted average capacity factor for projects in operation in 2022 reaching a calculated 33.2%; it bottomed out at 12.3% in December.¹⁰

9

<https://thehill.com/policy/energy-environment/3836301-99-percent-of-u-s-coal-plants-are-more-expensive-than-new-renewables-would-be-report/>

10

<https://www.spglobal.com/marketintelligence/en/news-insights/research/2022-monthly-us-solar-capacity-factors-underscore-winter-doldrums>

In fact they change throughout the hours of the day. They can fluctuate given the weather.

And grid operators are **constantly** calculating these factors. So generating electricity and getting it from Point A to Point B is an enormously complex undertaking.

And while you're not an expert, you now understand the basics of how utility-level energy works. And you understand the cost advantage that solar can bring to the mix...

Frankly, no matter where you fall on the debate about renewables, EVERYBODY likes saving money!

Bottom line solar **can** be a very valuable addition to the energy mix!

If a company has the experience and expertise to provide that value. And I believe this company does...

Introducing SolarBank

Like I mentioned earlier in this report, **SolarBank (OTCQX: SUUNF/CSE: SUNN)** is a developer, owner, and operator of solar power plants across North America.



That means that their business model doesn't focus or depend on a single aspect of the solar industry — like producing solar panels.

We all remember the infamous Solyndra debacle (Solyndra was a solar panel start up promising to develop one of a kind “cylindrical” solar panels) that swallowed up some \$570 million in taxpayer dollars from the 2009 American Recovery and Rescue Act (ARRA) .

SolarBank isn't that. Instead, they're what you might call a “triple threat” in the market.

They operate on **both sides of the meter** and at the utility-scale level as well as on a “distributed” level. Let’s break down exactly what they do.

1. Behind-the-Meter Power

The first is in the commercial and industrial sectors with “behind-the-meter” installations.

Behind-the-meter refers to a direct source of power to the consumer — one that doesn’t interact with the electric grid. Photovoltaic solar systems are the typical example of BTM systems.

These systems come with a number of advantages. First, they effectively make the consumer of that power “energy-independent” — no longer completely reliant on the grid. Another major benefit is cost savings which, depending on the consumer’s energy usage, can be substantial. And in these days of government giveaways, it could also make them eligible for investment tax credits.

Add to that the sustainability factors and any regulatory demands and BTM systems are very attractive options. If you doubt the demand these advantages have already generated, have a look...

PRESS RELEASE

09 April 2018

Apple now globally powered by 100 percent renewable energy



Cupertino, California — As part of its commitment to combat climate change and create a healthier environment, Apple today announced its global facilities are powered with 100 percent clean energy. This achievement includes retail stores,

offices, data centres and co-located facilities in 43 countries — including the United States, the United Kingdom, China and India...¹¹

And they're not alone. Other big names have announced similar goals...

[Home](#) > [News](#) > [Setting Records, Walmart Continues Moving Toward...](#)

Setting Records, Walmart Continues Moving Toward Becoming a Totally Renewable Business

April 29, 2021 | 1 Min. Read | Sustainability |      

April 29, 2021

By Mark Vanderhelm, VP of Energy and Facilities Management

Doing what's right for the future of our planet means making major change. That's why we've committed to becoming a regenerative company powered by 100% renewable energy in our own operations by 2035...¹²

And...

¹¹

<https://www.apple.com/uk/newsroom/2018/04/apple-now-globally-powered-by-100-percent-renewable-energy/>

¹²

<https://corporate.walmart.com/news/2021/04/29/setting-records-walmart-continues-moving-toward-becoming-a-totally-renewable-business>

Becoming climate positive

The IKEA vision is to create a better everyday life for the many people. Climate change threatens this, for people today and for generations to come. Becoming climate positive means reducing more greenhouse gas emissions than the full IKEA value chain emits, while growing the IKEA business.

Our main priority is drastically reducing greenhouse gas emissions across the IKEA value chain. We will reduce the greenhouse gas (GHG) emissions from the value chain in absolute terms by at least 50% by FY30 compared to baseline FY16 and at least 90% latest FY50.¹³

Institutional demand based on cost savings, regulatory compliance in some instances and, let's face it, the good name that comes with a "saving the planet" energy goal is very real.

2. Community Solar

A second area where they operate is known as "community solar."

Community solar projects are one small step up from the BTM projects that are becoming popular with bigger entities.

The US Department of Energy:

...defines community solar as any solar project or purchasing program, within a geographic area, in which the benefits flow to multiple customers such as individuals, businesses, nonprofits, and other groups. In most cases, customers benefit from energy generated by solar panels at an off-site array.¹⁴

The solar farms (or "gardens") that generate this power are owned either by private developers or, in some cases, by the community itself.

Residents and businesses in the plan subscribe to the service and pay the community solar provider a monthly fee based on their subscriber rate. The electricity generated through these farms is then sent to the grid and the utilities, in turn, pay the provider for that electricity.

¹³ <https://www.ikea.com/global/en/our-business/people-planet/becoming-climate-positive/>

¹⁴ <https://www.energy.gov/eere/solar/community-solar-basics>

Subscribers ultimately get paid back in the form of utility bill credits.

The distribution configuration may sound unnecessarily complicated, but according to some studies, subscribers in community solar plans can lower their electricity bills by up to 20%.¹⁵

And based on that, community solar projects are beginning to grow at a more rapid pace. But don't take my word for it...



The screenshot shows the CNET website header with the logo on the left and a 'Join/Login' button on the right. Below the header is a navigation menu with links for Tech, Money, Home, Wellness, Home Internet, Energy, Deals, Sleep, and Pi. The main content area features a breadcrumb trail 'Home > Home Energy & Utilities' followed by the article title 'Community Solar Is Growing to Fill the Gaps in Clean Energy' in a large, bold, black serif font. Below the title is a sub-headline: 'The community solar model can offer an affordable way to go solar. Is it coming to your state next?'.

Community solar is already going in 23 states and is expanding to even more. According to the article:

The community solar industry is growing, with total capacity in the US expected to increase from about 6 gigawatts in 2023 to 14 gigawatts by 2028, according to an analysis by the consulting firm Wood Mackenzie.¹⁶

¹⁵ <https://www.energysage.com/community-solar/#what-to-know-about-community-solar-billing>

¹⁶

<https://www.cnet.com/home/energy-and-utilities/community-solar-is-growing-to-fill-the-gaps-in-clean-energy/>



NEWS

A way to get solar energy — no rooftop panels required — is making headway in Illinois: ‘Community solar is about to explode.’



By **NARA SCHOENBERG** | nschoenberg@chicagotribune.com | Chicago Tribune
PUBLISHED: October 28, 2022 at 6:00 a.m. | UPDATED: October 28, 2022 at 10:00 a.m.

Community solar is gaining ground in states such as New York, Minnesota, Massachusetts, Maine and Illinois, which in 2021 had enough community solar to power about 44,000 homes, up from 17,000 homes in 2020.

“Community solar is about to explode in terms of access and truly being able to see it everywhere and in your community,” said Nicole Steele, a senior adviser at the U.S. Department of Energy’s solar technologies office. “It’s just another way to help in the clean energy transition, be part of the clean energy transition, and see the actual benefits.”¹⁷



Maryland becomes the 23rd community solar state

With the signing of HB 908, Maryland becomes the 23rd U.S. state to implement a shared-access community solar framework without limitation to accessibility.

MAY 17, 2023 **MICHAEL SCHOECK**

Maryland Governor Wes Moore (D) has signed the state's community solar legislation, HB 908 into law, effectuating a state framework to provide clean energy to the state's residents, including low- and moderate-income (LMI) households.

"This bill has the potential to reduce the energy burden on thousands of low- to moderate-income (LMI) Maryland households while generating clean and renewable solar power on developed land, such as rooftops and parking canopies in our cities and towns," said Kim Coble, executive director of the Maryland League of Conservation Voters.¹⁸

3. Utility-Scale Solar & Battery Storage (BESS)

As we previously discussed, utility-scale solar refers to huge solar arrays that generate power that's sent directly to the grid. In this arrangement, the utility company is the power provider's customer. Another way of thinking of them is as "front of the meter" power sources.

The technology used in these configurations is nearly identical to what you'd find on the roof of a home with solar panels, except they are **massive** installations.

They operate under contracts with utility companies called power purchase agreements. PPAs are long-term agreements which stipulate the length of the agreement, generally between 5 and 20 years,¹⁹ and the prices that will be paid. These contracts are designed to assure the solar operator and any other stakeholders an adequate return on their investment.

To be considered a utility-scale project, at least according to the U.S. Energy Information Administration (EIA), a solar plant has to have a total power capacity of 1 mW. By this standard, there are currently over 10,000 utility-scale solar arrays in operation. A more practical definition, however, says that *size requirements for utility-scale solar projects depend upon the market in which the project is being built.*²⁰

And the other encouraging news is that the costs of building these arrays has been coming down in recent years which lowers the negotiated price of the PPA, making solar an attractive option for utility providers.

Now you might be thinking about the standard objection — solar arrays don't produce energy at night. And of course you're right. That's why these providers operate hand in hand with another technology known as Battery Energy Storage Systems or BESS for short.

¹⁸ <https://pv-magazine-usa.com/2023/05/17/maryland-becomes-the-23rd-community-solar-state/>

¹⁹ <https://www.solarreviews.com/blog/how-does-utility-scale-solar-work>

²⁰ <https://www.urbangridsolar.com/what-is-utility-scale-solar-an-overview/>

Utility-scale battery storage systems consist of the battery itself, a battery management system which monitors the optimum charge level of the battery itself, and a power conversion system that converts the DC battery power into an AC current that can be sent to the grid.

According to global consulting giant McKinsey:

We expect utility-scale BESS, which already accounts for the bulk of new annual capacity, to grow around 29 percent per year for the rest of this decade...²¹

That they operate across three growing areas of solar demand is a particular strength of the company. But the way they execute is equally advantageous.

These are the three areas in which SolarBank operates. Now let's take a look at **how** they operate.

A Vertically Integrated Business Model

Just like SolarBank doesn't focus on a single solar market, neither do they engage in only one aspect of their business execution.

The company structure is completely vertically integrated. What do I mean by vertically integrated?



It means while many competitors only focus on one aspect of planning, installation or management they handle every step in the production chain of what they do. Let me walk you through it.

Origination: First off they handle all the origination work that goes into a project. This means they start from ground zero researching policies and laws to understand the requirements that would impact any project. They handle the site review process as well. No surprises popping up down the road to slow or derail or add unexpected costs to a project.

They also undertake the financial analysis of a given project examining the costs and potential revenues.

They also take on the project of site control. Site control includes locating and acquiring the property necessary to make the project a reality.

Development: The second step in the renewable energy value chain is something called project development. It's the work that gets done before the work starts. These include ensuring grid interconnection. It's obviously critical that any energy source be able to connect to the delivery mechanism. And they ensure any federal regional or local regulatory commissions are dealt with

They handle environmental approvals ensuring that all requirements will be met.

They negotiate applicable power purchase agreements as well as any incentive and or tax / PILOT (payment in lieu of tax) payments.

Finally they handle something called AHJ or Authority Having Jurisdiction permitting. This can be one of the trickiest steps. There are all kinds of federal, state, county, or city officials that can fall under the label AHJ fire marshals, labor departments, health departments, building and electrical inspectors.

Ensuring all the boxes are correctly checked here is critical.

Financing: The next step in the process is securing financing. With the Biden administration passing the Inflation Reduction Act (in reality a green energy spending bill) a slew of new investment tax credits were established for solar projects. SolarBank ensures that all the requirements are in place to qualify for the maximum benefits.

Additionally they oversee construction financing through equity and debt issues.

EPC – Engineering Procurement and Construction: This is likely the biggest step in the delivery process — building out the infrastructure. Without solid management, even small solar projects can run into trouble.

In this phase they oversee the project design including the timeline for delivery, the procurement and purchase of all the necessary components and materials and finally the actual construction of the power generation system.

O&M – Operations and maintenance: Once all the planning, financing and construction are complete, SolarBank has the expertise to actually run and manage the facility (for a fee!) This includes bringing the project online and then managing customers (subscribers) as well as the structure (assets) themselves.

Asset management includes tasks such as monitoring system performance and doing both preventative as well as reactive maintenance should any kind of breakdown occur. I don't need to tell you how critical this is to keep a solar power plant up and running at maximum production.

This business design gives them complete control over any project. No unexpected surprises from outside contractors to bog down the process. This is a huge advantage. Especially in a time of potential uncertainties associated with global supply chains. Having all the steps directly under your control is a major advantage.

Their being a one-stop shop makes them especially attractive to municipalities and other power buyers — it's a major advantage that SolarBank has over its competitors who specialize in only one area of the delivery process.

Now that you have a little background on the company, let's talk about some of the highlights of what they have accomplished over the past decade.

A Winning Track Record

SolarBank went public in March of 2023. But they had been in business, AND earning revenue, for a decade prior. And they have been profitable from **day one**.

Their first project in 2013 capitalized on a program known as a Feed-in Tariff (aka a FIT). A brief history:

In order to promote a clean air environment, develop a renewable energy industry, and create jobs in Ontario, the provincial government demonstrated its commitment to these principles by passing the Green Energy and Green Economy Act (Bill 150) in 2009 and Ontario's Long-Term Energy Plan in 2013. The Independent Electricity Operator Authority (IESO) released its Feed-in Tariff (FIT) program to incentivize the investment towards renewable energy sources...

The "incentivization" was accomplished via government contracts offering stable prices and long-term relationships to renewable energy producers.

SolarBank initially applied for, and received, significant participation rights for 113 contacts under Ontario's Independent Electricity System Operator FIT-2 program eventually building out 40 mW of solar power installations.

Their initial focus on small FIT solar projects including rooftop and ground mount installations fueled their success giving them working capital and leading to further growth in the area.

The following year they won 76 contracts and built out another 40mW under the FIT-3 program. The next year they received 185 contracts under the FIT-4 program delivering 98mW. Finally they received 250 contracts under FIT-5 where they built out 130mW of power generation.

They are still under these contracts and receiving revenue from the program and will be for the next 15-plus years.

They were off to a very smart start.

After establishing themselves on the Canadian side of the border, they branched out into the US primarily throughout New York State and Maryland. Since then they have completed hundreds of solar installations from rooftops to ground-mount solar farms to commercial and industrial (C&I) installations. They have completed 70 community solar projects in collaboration with the Central New York Regional Planning and Development Board alone.

It would be overwhelming to detail every one of the projects they landed and completed so let's sum up some of the highlights.

- In 2017 they entered into a Master Service Agreement with the State of Maryland, via the Maryland Department of Transportation for Renewable Energy Development. The arrangement commenced on February 22, 2018 and is contracted to run for 30 years...
- In 2018 they launched four community solar projects with a total capacity of 10.2 mWdc into commercial operation...
- In 2020 they installed and launched another 7 MWp community solar farm supplying energy to local residences in upstate New York...
- In 2021 they put three more solar projects into commercial service — two net metering projects and one community solar project...
- In 2022 they placed six additional solar projects into service including two municipal PPAs, one zero-export project (an installation that doesn't send surplus power back to the grid), one for "Behind-the-Meter Net Crediting" and two community solar projects...

They have flagship projects in Richmond, Macedon, Manlius and Troupsburg NY totaling over 22mW of solar power.

They currently have over 100 power plants under management (i.e. providing revenue).

Their financial team is incredibly experienced in the energy field having, over the years, managed over \$200 million in financing.

They currently have 1 gigawatt of energy development in their pipeline and five solar farms under construction so forward revenue is solid at the very least.

And their experience in the Battery Energy Storage System (BESS) field will allow them to ultimately make solar “dispatchable.”

If all this weren't enough, they recently signed a deal I believe could take them to the next level in solar power production.

A Major Business Breakthrough

In late 2023 SolarBank hit the proverbial motherlode when they entered into a \$41 million deal with Fortune 100 company Honeywell.

The company had been constructing three 7mW ground mounted community solar projects known as B 13-1, SB 13-2 and SB-14 in upstate New York when Honeywell came knocking and acquired the project.

From the press release (my emphasis):

*The Company will now continue to build the Projects for Honeywell to commercial operation via an engineering, procurement, and construction ("EPC") agreement. The sale of the Projects and EPC agreement have a total value of approximately US\$41 million. The Company also **expects that it will retain an operations and maintenance contract for the Projects following the completion of construction.***²²

That O&M service provider revenue would extend for the next 35 years (the average solar project lifecycle)!

The expected completion of the project is in the second quarter of 2024.

And while this is likely the most newsworthy deal they have struck, they have worked with other nationally known companies in the past as well. Companies like Home Depot, Panasonic, PNC Bank, Charley's, RBI Solar just to name a few.

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<https://www.newswire.ca/news-releases/solarbank-completes-sale-of-21mw-community-solar-sites-in-upstate-new-york-to-honeywell-international-856417967.html>

I believe this deal has taken them to a new level of solar production. One that will lead to even bigger projects and put them well on their way to becoming an Independent Power Producer (IPP).

From the company itself:

Going forward, SolarBank will judiciously fold-in a "build-and-own" revenue model. Rather than transferring ownership and seeking to serve as operator, the Company will retain ownership of select solar projects, subsequently selling the energy to a utility, government, or end user, effectively transitioning the company into an Independent Power Producer ("IPP").²³

Here's the bottom line... Solar bank has over a decade of **successful** experience building out and running smaller scale (rooftop and community solar) projects that will allow them to scale into a utility-level presence building out and managing 100-plus mW solar installations.

You won't find this kind of experience on a balance sheet, but it is an **invaluable** asset for the company.

I could go on about this company but I hope you get the idea. They are a standout in the business. And the best part is they're still small and I believe could be on the verge of breaking out.

All this success has put them in a solid financial position.

Solid Financials

With a market cap of US\$173 million, SolarBank is a solid financial performer. They recently released their consolidated financial statements for their 2023 fiscal year ended June 30. And their results for FY2023 (ending June 30) were impressive.

On the current asset side of the ledger they are in solid shape with over CA\$7.3 million in cash and cash equivalent investments. The balance of their current assets holdings brings them up to just over CA\$22 million largely on growth in receivables and unbilled revenue.

On the flip side, their total current liabilities for 2023 came to just over CA\$7 million. But within those numbers you'll see they have virtually no debt. Their current due on long-term debt came to just over CA\$151,000.

Their long term debt is very modest as well reported at CA\$759,000.

²³ <https://finance.yahoo.com/news/solarbank-corporation-announces-successful-ipo-130000081.html>

Top-line revenue for 2023 was CA\$18.4 million with the majority of that income coming from their EPC services. That represented an 80% revenue increase from their gross of CA\$10.2 million in 2022. So their business is moving in the right direction.

Their bottom line for the year came in at CA\$2.2 million or 0.11 per share (undiluted). This was versus an operating loss of CA\$188,000 in 2022.

Their revenue growth is solid.

With the projects they have in their pipeline, their guidance for 2024 looks to be on the same track, projecting revenue of CA\$45–50 million for FY2024.

In addition, they recently released their first quarter results for 2024 ending September 30, 2023.

Their top line revenue for the quarter totaled CA\$7.7 million, up 40% from CA\$5.5 million the same quarter the previous year. Net income came in at just over CA\$2.0 million.

Annualized, their top line number is behind their annual guidance, but the company continues to maintain its CA\$45–50 million target for 2024.

And it's likely a good bet thanks to the CA\$41 million Honeywell deal.

Now let's talk about their management for a minute.

An Experienced Leadership Team

It doesn't matter what industry you're in or how well capitalized you are, as a small-cap company, if the management team isn't up to the task, the company is going to fail. That's why we always take special care to vet the management team when we're investigating a company.

USCM's team is as solid as we've seen. Let's run through the highlights of their management and directors.

Dr. Richard Lu, MD, MSc., MHSc., MBA President & CEO, Director

Dr. Lu has more than 25 years of experience developing and implementing global energy growth strategies for organizations in North America, Europe and Asia. At SolarBank he leads a team of established and trusted developers, engineers, asset operators, and managers in the clean and renewable energy space in Canada and the US.

He is an Independent Director at dynaCERT Inc. (DYA.TSE), a growing high-tech company that specializes in hydrogen application in the transportation industry. He was the Managing Director

of Sky Solar Holdings Co., Ltd. (SKYS, NASDAQ), and the VP of Business Development at ARISE Technology Corporation (APV-T).

Dr. Lu previously held the position of Chief Conservation Officer and VP of Environmental Health and Safety at Toronto Hydro Corporation, and senior positions with Enbridge Gas Distribution, Husky Injection Molding Systems Ltd., and Dillon Consulting.

Sam Sun, MBA
Chief Financial Officer

Mr. Sun is a Chartered Professional Accountant in Canada with more than 15 years of experience in corporate finance, accounting and internal control. He has been the head of finance or finance director at various Canadian, U.S. and Chinese public and private companies in the cleantech, marketplace, manufacturing and mining sectors.

Mr. Sun obtained his bachelor and masters degrees in management from the Shanghai University of Finance and Economics in 2005 and 2014. Mr. Sun also obtained his MBA from the University of Toronto's Rotman School of Business in 2018.

Andrew van Doorn, PE
Chief Operating Officer

Mr. van Doorn has over 28 years of executive leadership experience in Engineering and Construction in the Renewable Energy and Utility sectors, with over 200MW of solar projects completed. As former Chairman of the Canadian Solar Industries Association (CANSIA), Mr. van Doorn is an expert in the management, operations, and construction of solar photovoltaic systems.

He is a Professional Engineer, designated in the province of Ontario. Mr. van Doorn's solar experience includes 32MW of community solar in Minnesota, 28 MW built or under construction in New York State, and 20 MW of ground mount systems in Ontario.

His further experience includes 140MW of rooftop solar spread across 600 sites in Ontario, including at over 500 schools and North America's largest school rooftop portfolio at the Toronto District School Board, with over 350 sites.

Tracy Zheng, MBA
Chief Development Officer

Ms. Zheng is an accomplished business strategist with over 25 years of experience in brand marketing, investments, business development and solar project operations. She is responsible for managing solar sales teams, project feasibility studies and partnership negotiations.

Tracy held senior marketing positions specializing in branding and strategy in Colgate-Palmolive, Clairol and other marketing research and internet companies. She holds both a Bachelor of Science in Engineering from Sun Yat-Sen University, and an MBA from York University.

Paul Pasalic, J.D., Director

Mr. Pasalic is a private equity professional and a corporate lawyer with more than 15 years of experience in corporate, securities and regulatory matters. He has advised on a diverse array of complex multi-jurisdictional transactions across various industries and across the capital structure.

Mr. Pasalic holds a bachelors of business administration (finance) degree from Simon Fraser University, and obtained a juris doctor from the University of Calgary in 2007. Mr. Pasalic is a qualified attorney in Canada (Ontario; Alberta), New York State as well as in England and Wales.

Mr. Pasalic is also a CFA charterholder.

Olen Aasen, J.D., Director

Mr. Aasen is an executive and corporate and securities lawyer with more than 16 years of experience in corporate, securities, mining and regulatory matters. He has been the Corporate Secretary, General Counsel or Vice President, Legal at various Canadian and U.S.- listed companies in the mining, transportation and technology sectors.

In the past ten years Mr. Aasen has advised on a significant number of debt and equity financings and structured finance packages.

Mr. Aasen did his undergraduate studies in the Finance Department of the Sauder School of Business, obtained a J.D. from the University of British Columbia in 2006 and was called to the British Columbia Bar in 2007. Mr. Aasen was also appointed to the 2016 Legal 500 GC Powerlist for Canada.

Paul Sparkes, Director

Mr. Sparkes is an entrepreneur with over 25 years of experience in media, finance, capital markets and Canada's political arena. He spent a decade in the broadcast and media industry as CTVglobemedia's Executive Vice President of Corporate Affairs.

He also held senior positions in public service, including with the Government of Canada as Director of Operations to Prime Minister Jean Chretien, and as a senior aide to two Premiers of Newfoundland and Labrador.

Mr Sparkes was a co-founder and executive vice chairman at Difference Capital Financial and serves on a number of private and public boards. He is currently President and founder of Otterbury Holdings Inc., Global Alternatives Advisory, and is an advisor and deal maker for growth companies in the private and public markets.

There Are Still Risks...

And now it's time for the full transparency chat...

With all that SolarBank has going for it, there are always risks involved when you're thinking about investing in a small cap company.

And the number one issue that faces a smaller company is money — as in running out.

Despite their solid financial position, their development pipeline and their operational revenue, much of their future success will depend on the availability of third-party financing arrangements that will allow them to expand their pipeline of business into other key markets. They have been outstanding in being able to essentially bootstrap the company's working capital thus far. But moving forward there can always be challenges.

The good news where this goes is that there are private funds that have taken a serious interest in the area of renewable energy.

Infrastructure investing giant Brookfield Asset Management said it hopes to raise more than \$25 billion for two new private funds investing in clean energy.²⁴

So the good news is the entire industry is not dependent on government spending. And speaking of the government...

Government incentives and regulations pose another threat to their expansion. While it doesn't seem likely at the moment in the US, changes in regulations and incentives could impact demand for the company's services. Remember my initial example at the beginning of this report?

And in an election year this may be especially challenging. It's worth noting that currently 90% of their customer business comes from government contracts. A change in the landscape could put a damper on their future plans.

I would say, however, that their success thus far has shown a definite resilience and ability to manage and grow their resources. Nevertheless, government regs and participation could be a factor.

Then there are potential development issues themselves. The development of any project is subject to permitting and interconnection approval. These are more local issues but critical ones nonetheless.

Where this goes, I believe their vertically integrated structure, one that gives them control over issues such as these would probably minimize their likelihood.

With all that said, I believe that SolarBank is managed well enough to keep these risks to a minimum.

The Bottom Line on SolarBank

So, where does this leave us?

You should love this company if you're "all in" on a green, renewable future.

And even if you're a green skeptic, this company is still worth serious consideration.

The bottom line is, there is a future for renewable energy. The challenge for investors is finding the companies that will fit into that future and make it work for them. Unfortunately, many renewable energy companies are dependent on government handouts and subsidies to survive. Those companies are destined to fail.

SolarBank is carving out its path in the industry. A unique and needed path. It's a company that is fulfilling real needs, and, most importantly, making money doing it. A true rarity in the renewable energy space.

I strongly recommend you consult with your financial advisor to determine whether an investment in **SolarBank (OTCQX: SUUNF/CSE: SUNN)** makes sense.