Startup in the Land of the Rising Sun:
A Japanese Solar (ad)Venture

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DEDICATION

To my wonderful wife Tomoko. With your strength and support I found free expression and unconditional love. Thank you.

To my wonderful kids Bradley Jr. and Marie. Inspiration really is from the bottom up. Both of you bring a peace to my mind. I love you very much.

Daddio

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ACKNOWLEDGMENTS

To all my many friends and supporters.

Thank you for your patience on my long journey. I hope that you will find something of value in this text.

This book is brought to you by Mount Fuji. In some instances it seems that we have to spend more money when a site has a view of the 'Fuj'. It is strange because the solar panels do not really care. But, for our solar asset managers, Mt. Fuji is sunny.

1 - STARTUP MODE

There are many reasons for reading every word.

The energy I want you to know is the creative process and thought bubbles that occur during startup venture business acceleration. I bring to you the emotional and pleasurable roller-coaster of running my own destiny.

Here in March of 2014 I find myself doing solar deals in California and across Japan. The hours being put in are long, but the pleasure of securing new business is here. Each deal has a certain cadence of risk and reward.

I took the majority of photos in this book. Notable exceptions are when I appear in the photo, unless it's a selfie, I think someone else took it. I am sure I will hear at the dinner table, "Hey... I took that picture..."

Let's start with Japan. This new business has been an epic startup experience. Each and every day life plays strong hands and decisions have to be made. Are you Ready?

Thank you,

Bradley L. Bartz
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The beginning of a new business always starts with conversations with mentors and friends. The focus as the entrepreneur is to find the kernel of truth in an idea and then proceed to surround the space. This book is about starting another passionate business, this time with a magnifying focus on solar energy.

After living in Japan for 11 years, I returned to the land of my birth, Los Angeles, California. I was a newborn in that I had no company to run. The float period is the scary one. It is the period that you do not have an idea, you just know that you have to have one. I questioned myself, I explored, l listened. I saw. I saw my next business through a telescope looking at the naked roofs of LA.

The emotion of the found idea is hard to describe. All of a sudden my mind gets real clear and sees far. Very, very far. The idea caresses my face with the sun's heat just warming me up. I see far. From the fire hell of making solar cells to the silence and birds chirping in trees by large solar farms. The details of the business spill before me. I see the details, the next steps, I write. I write and then I write some more.

The business plan has a familiar shape. The mission statement seems to appear about halfway thru the exercise. The outline defines the market, the technology, the marketing, math and contact points to execute on. Every business must have a plan. Every entrepreneur must be fluid in its execution and rapid in adoption of change. Join me as I tell our Japan expansion story.

The Japanese solar business started because Jay Smith came to Los Angeles and stayed the week in early January 2012. We waxed on philosophically about our Internet company in Japan that we ran together during the 1990s. Jay told me about his University of Maryland Entrepreneur School of Business program that he designed and runs. The conversations were exciting and Jay.

Just the prior spring Japan was devastated by the Tsunami, earthquake and nuclear meltdown. A shocking global period of mourning was still in place during Jay's visit. This was especially poignant for Jay and I as a big portion of our lives are Japanese. We love Japan and felt the need to contribute again.

Nishi, January 4, 2012

I have been building ABC Solar Inc for 11 years now. Over that time we have become very good at solar and have developed some very interesting solar applications.

I think Japan will be the most important and largest solar market for the next 10 years.

As with all business revenue is made by selling. I think we can develop a path together to sell solar in Japan. Our business tools for solar are quite spectacular and are multilingual capable. Besides Japan and the US markets I am looking at Australia, Central and South America.

I would like to talk about establishing ABC Solar Japan as a new entity that has your ownership in mind. Basically All Japan activity would stay in Japan. ABC Solar US would not profit from Japan operations until three full time employees plus you are being paid out of cash flow.

The three positions to grow into are:

Administration
Sales
Installation

Administration is basically supply, permitting and rebate paperwork for solar systems.

Sales is web based, phone and face-to-face.

Installation -- this is key. We need to find a roofer and electrician to work with. We also have www.cbc.co.jp on the hook to provide installation services to our sales.

ABC Solar Japan should sell the following:

1. Solar Grid-Tie Systems
2. Solar Water Pump Systems - for fish ponds and swimming pools
3. Sun Oven -- give me your address and I will send you a Sun Oven. See www.Japan.co.jp for a dairy of solar cooking.
4. The Solar Table - www.TheSolarTable.com
5. Solar Applications that you design

I have a terrific Online Solar Management System at www.abcsolar.com. This system is Oracle Application Express based and is very powerful. I'll set up an account for you. One of the key tools is our Grid-Tie Solar Design tool. I think you'll love it.

Japan Strategy.

I have just a few ideas on how to open the Japanese market over time. As with everything, ABC Solar Japan will take its time to grow.

1. Websites and Japan phone support # -- we can take support calls during Japanese business day here in CA when needed.

2. Make Wayne Shaw member of ACCJ and pay for him to go to ACCJ

lunch meetings. The intent here is to get US Leads from the Americans he meets. ABC Solar US is selling more commercial projects these days. Wayne would also give ABC Solar Japan access to Tokyo.

4. JETRO - use JETRO to sell Solar Pool Pump systems to Japanese middle schools that have swimming pools (30,000 schools). Also JETRO can provide free office space in Tokyo. We don't particularly need the office space in Tokyo, but working with JETRO will provide leads.

I know the Okinawa Japan rep here in Los Angeles. He can provide assistance too.

5. Rajiv has a radio network that he provides programming software for in Japan. We need to make a deal with him to advertise ABC Solar Japan across the radio waves in Japan.

6. Translate SolarDaily.com -- By ABC Solar Japan sponsoring a Japanese language version of www.SolarDaily.com we will get known by the competition in Japan. This is key.

7. Look to publish our http://solarbible.com/books.html
books in Japanese

8. Make Nishida a Solar God on Japanese TV

9. There is no number 9.

Let me know if this all makes sense to you.

Hey Brad,

Totally interested. World needs solar more than ever.

As you know I moved to Okinawa, hoping someday I will be off the grid. Whole nuclear thing really pissed me off.

And my goal here is to establish a woodland burial cemetery in Okinawan natural forest. The people's fear for dead help keep the place untouched and form kind of an asylum which will protect the forest and ocean hence human.

I wrote something about it on my blog and they seemed to like it. One of the local free paper quoted my article.

http://palenqueros.blogspot.com/2011/10/be-tree-save-forest-woodland-burial.html (jpn)

But this is in the future.

If you are looking to widely promote your solar through out Japan starting from Tokyo, I am not in a good location. But I think Okinawa is not at all a bad place to start it with. Especially with English language support. A lot of US civilians live here and they would love your solar hot tub. -- Not quite sunny as California though.

Okinawa is a subtropical island with a history of independent country. This island is not Japan. It has been ruled by Japan. In fact, Japan is destroying it.

Energy cost is very expensive here since everything is imported from Japan. Farmers and fishermen would love to harvest from the sun.

Despite the cost of living, people suffer from the lowest average income. Big Jap corps are enslaving Okinawans. And local office promotes it.

But many Okinawan people still believe in living off the island, not being fed by the Gov.

On the other hand, the population ratio of child is the highest in entire Japan. In 20 years, large amount of youth of "Japanese" will be from "Okinawa".

Let me carefully go through your ideas and do some research on it. I have couple of ideas too.

I'll get back to you.

That is how ABC Solar Japan KK started. The real fascinating part is how fluid we have been in response to the Japanese solar market. The real story is told here. To me, this is the most EPIC startup I have had the pleasure of founding. The beauty is the partnership with Nishida and Bartz is picking up from 10 years prior when they ran the Japanese Internet company together. Both of us have fine-tuned our skills and are very comfortable with ourselves. Cool.

As you have just read, the business offer was retail and a takeoff of ABC Solar USA's operations. The fun part is how the (ad)Venture in Japan shaped our operations as we path towards boring day-to-day activities.

As my partner and accountant at Tokyo Kyodo Accounting Office, President Uchiyama fondly says, "I love boring! That is when we start to make money!"

From this January 4, 2012 email to today Nishida and I have created a utility scale focused business that has the opportunity to install over 1 million solar panels in Japan over the next years. The opportunity is an obvious run on the Japanese Feed-In-Tariff of 42 yen per kWh produced over 20 years by a solar photovoltaic system.

Each 1 MW system will generate about 1 million kWh a year.

Each 1 MW system will generate about 42 million yen a year in revenue.

Banks will project finance 80% to 20% debt to equity ratio.

Solar Panels have 25 year warranties -- these projects make money over time.

2 -- MONGOLIAN YURT IN CHIBA, JAPAN

The exploration of the Japanese solar market began at a Yurt on the pacific coast in Chiba, Japan. The B&B run by a dear friend was blessed with myself and my partner as the first guests.

Our three week stay allowed the creative construction of our business model and plan. We studied, wrote code and excel spreadsheets. We fished and made bon fires on the cliffs. The rides into Tokyo offered a colorful look at 100 kilometers of Japanese country side as it turns from lush greens to concrete grays.

The circle of light of the Yurt would move along the floor reminding Mr. West and I that the sun does indeed keep moving. The warmth of space noticed.

The Yurt and its owner played a crucial role by introducing both Nishi and I back to mainland Japan.

I always recommend to write a business plan in a place of refuge. A place of joy. This Chiba Yurt, fondly known as Reefbreak Point B&B, provided us the creative freedom necessary to shape our ABC Solar Japan business plan and our destiny.

The Yurt had amazing speakers that when blasted at 11 would fill the valley with Pink Floyd. The words and code just seemed to flow. Our business plan took shape online at www.Japan.co.jp, a legacy domain that has been re-born to lead the solar revolution in Japan. The tools online allow the accurate estimating of solar projects in Japan and the management of projects. Our focus has become finding solar capable lands, getting FIT applications and permissions and packaging projects for development, construction, ownership and operations.

The Google Cough

One of the funniest things about writing our solar business plan was when Nishida's laptop caught "The Google Cough". Anytime Nishi would use a Google service his PC would start to cough. "cough…cough….cough" Like it had been a bad smoker. The remedy was to put his laptop in the freezer and go for a walk.

The tools of the entrepreneur are not shiny and new. They have historically been hand-me-downs and held together by duct-tape and bailing wire. This new solar venture in Japan is no different. Our austerity program pays big dividends in that we spend more time executing our plan than playing, drinkin and hangovers. Not to say that the Yurt was not a party, it was.

Each octopus trap is seen as a place to put a potential business lead or strategy. As a lead generator our job is to find as many as we can. As a company our job is to filter each and raise for our feast.

Nishida and I have written plans together before. The last time was in the resort town of Shimoda, Japan in 1996 where we wrote our free email business plan. This business grew to almost 1,000,000 Japanese users by 2002.

Fast forward to 2012 and we again are in an idyllic location to write a new ABC Solar Japan business plan. The shape becomes focused on large utility scale solar projects. Our solar knowledge and skills allow us access to major players in the business from bankers to solar panel manufacturers. We travel from Chiba to Tokyo to meet key players and return to further hone our plan. With Nishi in the background doing the heavy lifting I am just a happy camper with my cold Asahi beer and giant bamboo staff.

Dear Team ABC Solar America, July 4, 2012

You deserve a full accounting of my activities in Japan. I came to Japan because of the Japanese government commitment to take 30% of the homes solar within the next 10 years. One million homes have been done to date leaving 14 million more to do. The Feed-in-Tariff is $0.53 cents per kWh generated. This is almost 4 times higher than the LADWP FIT. 4 times. Although solar production is 30% less here, the numbers are astounding.

During the first month I had the lovely pleasure of staying on the beach in a Yurt. The Yurt is a circular tent ala the Mongolian style. I cannot quite describe the mood and feeling of that place. It is in this circular environment that my Japanese partner Tetsuro Nishida and I envisioned our business plan and started to execute. No one can back me in a corner in a circle. For those of you that knew Terry Matthews you will understand why his bank building had no right angles. Here are some pics: http://solar.japan.co.jp/The_Solar_Yurt/

We have established solar supplies with these companies in Japan:

Mitsubishi
Solar Frontier (owned by Showa Shell which is owned by Royal Dutch Shell.)
GW Solar - this company provides us with the 22% efficient panels that are the same that Sunpower uses.
Hyundai Solar Japan
Bosch Solar Japan
SMA Japan

We have identified several local contractors who want to install for us. This is somewhat of a weak link in that I feel that you guys in California are so much more talented and skilled at this work.

On the money front we are dealing with a very talented Accounting firm in Tokyo called TKAO.com. The president of this firm, Mr. Uchiyama, is very famous for making special purpose companies that big money firms use to be able to sell depreciation and tax equity. The TKAO team has been extremely helpful in guiding our business model to be safe and legal. They have provided good ideas and have come to funding meetings with nice impact.

The base of our model is to turn the 20 years of the Japanese rebate feed-in-tariff into a Bond, A Solar Bond. The technical banking term is an "Asset Backed Security." When we solve this puzzle the money involved will be staggering. Let me explain why.

A 12.5 KW solar system, installed correctly, can generate 10 million yen ($125,000) in FIT revenue. As a business we can install this for about $35,000. Our Solar Bond business will bundle this 10 million yen in revenue and sell to institutional investors in advance at a very low Net-Present-Value. The low NPV is because of the almost 0% or negative

interest rates in the Japanese market. For example we can see these numbers:

That is before the 100% depreciation in the 1st year that brings the Solar profit up another 1,381,815 yen.

Solar Investment Total:	JPY	3,290,036
FIT Total:		8,952,435
FIT NPV @ 2% APR:		7,343,362
Solar Profit:		4,053,326

The potential profit to ABC Solar Japan is $67,939 for each 50 solar panels we install. It can be said that for every $1 dollar in we get $2 dollars out. As we reduce the cost of install this number increases.

Ok, that is the Solar Bond and the bigger picture. But reality says we have lots of work to do to make the Solar Bond happen. So, of course, we are on the path to just sell solar direct to clients and make money the old fashion way, we will earn it.

On the money hunt, e.g. we are trying to raise 12.5 million dollars for our operations here. We are making good progress on this. At first we thought we had Symphony Partners, a Tokyo based hedge fund on board but they were not ready. And frankly we weren't ready either. The final meeting had some inside humor though. As I was giving my presentation my underwear fell to my knees. Although no one could tell, I was extremely distracted by my penis being a free willy. Nishida-san said I did fine and he did not notice, but I can tell you that it was very weird. I look at this as a sign that Symphony was not the right group. What does a guy like me do after a meeting like this? I start meeting the next potential funder.

The list of people I've met in Tokyo gets long very quick. The key highlights are:

Solar Frontier? we are looking to them for three specific things:
1. Supply
2. Money
3. The Solar Bond

The 3rd one first. The Japanese government did an amazing thing 2 weeks ago. It said that all one million of the already installed systems can be converted to get the $0.53 cents in Feed-In-Tariff revenue for 20 years. Could you imagine what SCE would this of that? Instead of just underwear

falling to their knees they would crap in their pants. We look at this as a huge potential for the Solar Bond. Not the SCE crap part, but the part of turning one million already installed homes into Asset Backed Securities. It's the holy grail of solar money.

Supply is strange in Japanese companies. I have to learn to behave and be patient as I wait for pricing. How much per watt? "we won't tell you." Ok, then how much for a system. "We can do that."

Monies from Solar Frontier. This is a wild card but it might pay off. Our solar design tools have been upgraded fantastically by the work of Nishida and myself. Our ability to show this software has really opened doors for us. The local solar players only sell fixed kits and are not ready to do string sizing, let alone system sizing by space available.

This past week Nishida and I moved into a new home about 10 miles from The Solar Yurt. The new home is big, cheap and on a river. The guy next door looks just like my dad, but has the edge that some marines from Vietnam carry. I like him a lot. The river home has a new warm feeling for our efforts and has also proven to be productive. The one issue is that we are far from the station so we have to ride bikes. Oh man I am getting in shape. This home also has a professional quality indoor squash court that I play in every day. I just can't believe how good of workout squash is.

Our landlord is Mr. Gregory Clark. Is famous in Japan for writing books about the "Japan Tribe" and for being a big landlord to foreigners in this Chiba area we live in. He is also going to be our first client. He owns 40 homes and many acres of land. You can read about him at www.gregoryclark.net. Quite a character. He wants to sell for us too.

I'm still not exactly sure how I got so lucky, but I'll take it.

On the business side the Japanese government has agreed to give us free office space and assistance in Tokyo. This will be very helpful for VISAs and getting some high level contacts to move our business forward. The free office also has free phones so you might hear my voice more often! (good or bad I'm not sure, but at least I can call.)

Finally, Nishida has been fishing for investment from an old friend who happens to come from the "second richest family in Israel." Yesterday we had another phone meeting with them. We don't have cell phone reception at the River home, some but not reliable. So we rode our bikes to the local shrine / temple and did our meeting there. The feeling of doing business

in such a soft spot was neat. The meeting concluded with the investor flying from London to Japan. We await his schedule.

With true venture spirit I thank you for allowing me this opportunity. I know you guys will sell a bunch and these hiccups in cash flow will be solved soon.

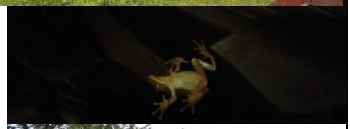
I have much more to write, but I will ask if you are interested in hearing more?

Bradley Bartz

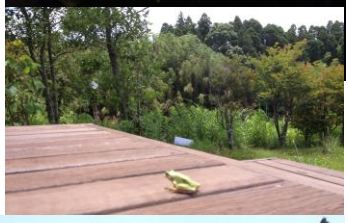
3 - BARBARIAN VILLAGE

From the Yurt we moved 5 miles away to the River House. This home in Izumi-shi, Chiba literally translates to Barbarian Village. Until mid-September 2012 this location provided moving inspiration. The moving part came in the form of bicycles and walking.

The river was fun to row boats in and the silence was ... quiet.



At night we would watch frog races on our main bay window. With no TV and the dark outside, this window was our main form of evening entertainment. The real "discovery" channel.



The business plan was set.

Now it is time to leave Chiba and tame the beast known as **The Big Mikan** - **Tokyo.**

One last note about living in Barbarian Village, Chiba, Japan. The chart to the left is how to ring the bell to communicate with your community. Mostly it is for warning of fire, typhoon, Godzilla, earthquakes and other natural and man mad disasters.

The other purpose is the announce the annual festival to celebrate the harvest and drink lots of sake.

The Godzilla signal is to the Moody Blues.

A travel back in time is necessary. From the River House we could see the path, but it was still whacked full of weeds and new ideas to find.

4 -- OKINAWA LIFESTYLE

We seem to float back in time when we land in Okinawa. The beach island culture just hugs you in a fine mist. The openness of the people and the powerful sun make this stop on ABC Solar Japan's (ad)Venture special.

A closeness to nature and to Japan is derived from our gestation period on the island. The business plan and its vision seems to shape itself as the people we come into contact with get infected with our startup energy. The helping hand is stretched and we start to gain wings in our efforts. Thank you Okinawa.

The most interesting and comforting part about Okinawa for solarman was the feel of California, the palm trees, the smiles and the sweet smell of the ocean. The feel of California was more than the visual, it was that the solar enthusiasm was contagious! After 12 years of California day-to-day solar operations I came to miss the "early-adopter" customer.

Japan has the feel of early adopter and also has the mindset and capability to actually achieve 100% of energy from renewable resources. This is solar, wind, falling water, ocean, geo-thermal and sex.

Just movement making clothes for iPhones to be fully charged.

Sometimes a random wall provides inspiration, luck and weirdness.

What people forget about solar is that it is not an internet business. It is construction craftsmen who climb physical roofs or drill holes in the earth.

Okinawa's grand old art scene brought me back to working with hands. The brilliant handmade fire and the way-out-there blown glass. The clay tiles were master pieces. Each roof having a cultural historical dragon or spiritual guide that is made from left over and broken roofing materials. Each and every roof has one. A Shisa.

The island also introduced us to the Japanese solar market and the unique operation of a steel factory. The son of the steel maker was a true solar geek and made the visit to the island a highlight for both me and Nishida. Mainly because of the many different solar mounting structures and sample installations that was on the property.

Also a solar powered electric dune buggy was the bomb!

Our explorations of the main Okinawan island took us from tip to tip. The far north was a virtual rain forest with yurts, tee-pees and hippies.

The US Military bases account for 40% of the island and made for interesting views and landscapes.

Because the US owns that much is actually turned out to protect the Jungle! In a strange way the US land prevented development. Hope Jungle lives on!

Okinawan Youth, Japan's #1.

Don't Be Scared!

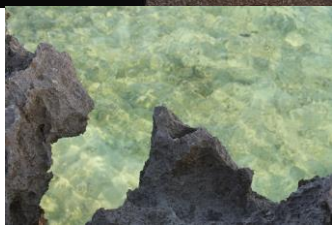
From Any Direction

Beauty is felt

and beauty is seen.

From here the water

flows to the ocean.



The north part of Okinawa is certainly my favorite. This almost off the grid village featured many handmade buildings from a wide variety of materials. Like the one above made of hay bricks. The inside is shaped silky smooth and has a light brown color that just feels so good as you run your hand.

Although this Shisa seems broken and verklempt, it does have the draw and power that you would expect from a local god.

Our business plan origins in Japan have followed the reverse path of Commodore Matthew Perry's opening the market exploits of the 1850s. The first business plan was a trading business and Internet company written in Tokyo in 1990.

This formed the basis for leading the first commercial internet operation in Japan. In 1997 Nishida and Bartz wrote a new business plan called Jmail, a free web-based email service. This business plan was written in Shimoda, Japan. This became the home port for the American fleet after Perry's successful treaty.

Now we find ourselves writing our ABC Solar Japan business plan in Okinawa, the first stop on Perry's tour-de-force. The business is to locate, design, supply, build, and manage solar plants across Japan.

The effort was called "The Solar Shacho" – a plan to create new business leaders in the solar market in Japan. We Japanized ABC Solar's Oracle based Solar Business Operating System (SBOS) and started to customize for use in Japan. Our SBOS features solar design calculators with 20 year proforma budgets, project management and investor relations.

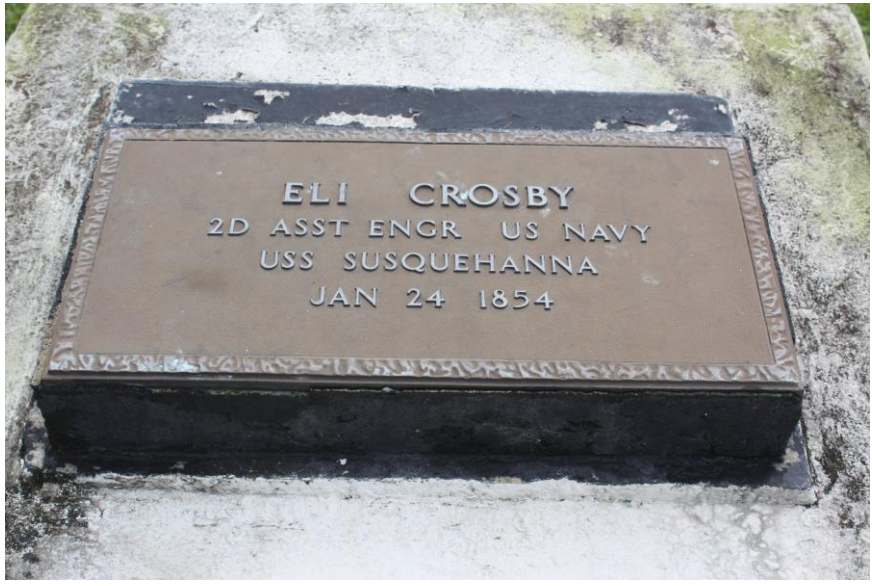
At www.Japan.co.jp we started our reach to create a solar network that is now delivering solar projects that we are developing. The inspiring thing about this business plan and this (ad)Venture is that it is working and profitable

The Beautiful Women of Okinawa

It seems to be an obvious statement that as a venture man your wife can get lonely and mad at your pursuit. In our case it is true as it would be for any couple where one mate has to travel and be away from home for long periods of time.

It is the Husband for sale sign that is for when we are at home…Go Figure!

On January 24, 1854 Eli Crosby from the USS Susquehanna died, he was part Perry's flotilla. The last Okinawan day feeds energy to our souls.



When I write a business plan I am lucky enough to be able to send drafts with the proverbial "red pen". These stakeholders help tremendously, even if it only to correct my terrible grammar or spelling!., If you find an idea you want to share with me just email Brad@Bartz.com.

The shinkansen bullet train is amazing. Every time I ride it I just love it. Now I can use wifi and keep writing. Some of the fun words will be compiled into other books.

5 -- MEGASOLAR ACCELERATION PLAN

ABC Solar Japan and its (ad)Venture recently wrote the following business plan that is a good summary of where the market is today.

Megasolar Acceleration Business Plan for Japan

1. Executive Summary
2. Solar Project Development Investment Opportunity
3. The Solar Market in Japan, Feed-in-Tariff and Competition
4. Organization & Management
5. Strategy
   a. Solar, Financial & Permitting Teams
   b. EPC, Civil Works and Construction Management
   c. Lease Land to Secure Development - Moderate Risk - High Reward
   d. Sell to "Ready-to-Build" Investors- Low Risk - Good Reward
6. Business and Permitting Process
7. Solar and its Technology
8. Funding Request
9. Project and Business Financials
10. Project Pipeline
11. Risks
12. Team

We see the path to install 1 million solar panels in Japan that will all qualify for a lucrative Feed-in-Tariff of either 37.8 JPY or 42 JPY per kWh produced for a 20 year contract period. We have 211MW of Japan Solar projects from 1 to 40 MW in our development pipeline. Our teams and network are finding new opportunities every week. The 211MW of projects are the culmination of reviewing over 2GW of projects. To reach 1 million panels we will install 250MW in projects. Our investment strategy:

a. Secure Lands and Solar Projects that pass our due diligence
b. Submit METI for FIT and Utility for Interconnection
c. Hire as necessary the 3rd party service providers to get permits and permissions
d. Procurement preparation including EPC, Supply, project management
e. (in parallel) Financial Package Presentation for Ready-to-Build investors

Our business model is to bring Japanese solar projects to a fully licensed, permitted and Ready-to-Build state. We firmly secure high-quality lands with our experienced team's skills & licenses and good contracts. Through our on-site experience in Japan - the "Wild East" of solar, we believe our method for securing lands is sound and greatly minimizes the funder's risk and the peculiar to Japan risk associated with solar project development.

"Accelerating Megasolar Development in Japan" is our mission statement. Our professional due diligence teams vet each project for key success factors like land, sunshine, interconnection points and friendly stakeholders to keep fluctuation risk to a minimum. We use web technology to manage each project to over 100 checkpoints and automation in project summaries, mapping and financials. Our tools allow investors to see information at any time and vendors can bid on major items like solar panels. Over the past 18 months our teams have methodically built the tools, resources and the model to simplify the solar project development process.

The Market Gap between land acquisitions and construction is that 82% of current 42 Yen FIT Approved Projects are not proceeding. This is because the Solar Development Process is much more involved than players realize. Our business model is to take opportunities from this gap and use our combined teams to polish and get ready each project.

The FIT rates are 42 yen ($0.41) and 37.8 yen per kWh with a 20 year Power Purchase Agreement (PPA) contract backed by the government. The Japan FIT allows all stakeholders to profit.

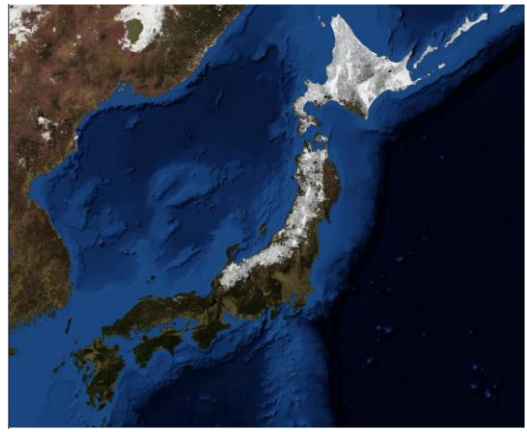
The solar project development investment is returned to investors at the close of construction finance for the project. We estimate the cost of 50,000 USD per MW for solar project development in Japan using our teams. We will return 80,000 USD per MW at the close of construction and project finance. Solar Project Development is riskier so the returns are meant to be higher than long-term investors.

We have large institutional investors who will then fund projects and with an estimated 80%/20% debt to equity ratio. The debt is from Japanese banks with terms estimated at 18 years and at 2.5% to 3.5% interest rates and 1 to 2 points.

Our relationships with institutional investors lowers the risk for the solar project development funding partner. Our solar project development partner has first rights to invest in the Ready-To-Build projects. We encourage you to contact our team to explore this investment opportunity.

We have a 211 MW pipeline of solar projects that are in various stages of development and engagement with ready-to-build financial investors. These are the first projects that the solar development funding will be used to gain all permits and permissions. We will make Ready-To-Build projects that are fully permitted for construction and 20 year PPA agreements in place that make them low risk investment opportunities.

We find that these prefectures have the most accommodating posture towards solar in Japan:



Yamanashi Prefecture
Shizuoka Prefecture
Saitama Prefecture
Chiba Prefecture
Ibaraki Prefecture
Tochigi Prefecture

The Japanese Solar Market

The Japan Feed-In-Tariff system pays for every kWh generated at a fixed rate for 20 years.

- FIT Rate: 42 or 37.8 yen per kWh generated
- Length: 20 Years
- All Export: 100% of the solar kWh generated can be exported
- Foreign Access: TUV or UL listing for systems larger than 10KW DC
- How Funded: Ratepayers pay for FIT (~87 yen per month)
- Market Mix: 80% residential, 20% commercial and utility scale
- Depreciation: 100% in first year for projects over 10KW.

There are 10 Utility companies in Japan. This makes the process for FIT and Utility approvals much simpler than the market in the United States. The Ministry of Trade and Industry (METI) has developed a standard Power Purchase Agreement that forms the basis for negotiating the 20 year FIT for our solar systems. The Japanese utility market is split into two separate operating systems. This occurred due to equipment purchases after world war II in the south were from Germany and the North from the US. This means that distribution is interrupted and each north/south

segment is stand-alone. The Japanese government is planning on unifying the divide which will make nationwide distribution of power seamless.

For the most part, our experience has been very good with the Japanese utilities. They have been fast in providing initial pre-checks of capacity and seem to be cooperative with solar overall. This is in great contrast to the United States where the monopoly utility companies fight against solar that is not owned directly by them.

24MWac in Takayama, Gifu. This 1,000,000 square meter land that was recently harvested.

Land & Project Finding Team

The Land and Project Finding Team is specifically tasked with the job to search, vet and negotiate deals with land owners and their representatives. The research effort is to work with real estate brokers across Japan to articulate the ideal solar lands that we are looking for. The research continues with the effort to reach out to known solar developers and brokers to find the best properties.

The land team is charged with checking for "Anti-Social" members that might touch the project in any way. This is a key step to our vetting process. The Land team has extensive experience in this particular area from their many years of experience brokering real estate transactions in Japan. The team services buildings as asset and building managers at over thousands of buildings across Japan.

The land team is also responsible for the legal real estate purchase or lease transactions.

Solar FIT & Utility Team

The solar team is tasked with optimizing the solar design for each property

and translating that into electrical and construction documents. ABC Solar Japan brings 13 years of direct solar design & build experience. The key to a successful solar project is the use of the best quality available solar panels, inverters, racking and balance of system parts. The 20 year financial lifetime of a project requires the use of the best and the planning for how there are installed, ABC Solar Japan brings this to the table.

The solar team is also in charge of all procurement and supply logistic activities. We have established supply relationship with Sunpower Japan, Foxconn (Hon Hai), SolarWorld, Mitsubishi, Hawhwa, Canadian Solar, Schletter, Schneider Electric, ABB, SMA and a variety of other top quality manufacturers. We choose supply based on the needs and configuration of

each site. When required, we source supply from USA, Europe, China and other parts of the world. The continued mission and focus is on quality of supply, logistics and after-market support.

The term "bankability" is a key consideration in our choice of materials and ultimately EPC and O&M providers. Non-recourse project finance is important to the success and the Japanese banks have very strict guidelines to have a project graded as bankable. Every choice is based on this.

The Feed-in-Tariff (FIT) applications and utility negotiations for the power purchase agreement (PPA) are the direct responsibility of this solar team. The efforts here and to be continually educated on the requirements and

nuances of successful applications. The coordination with the key equipment suppliers is required to design qualifying applications with their supply. ABC Solar Japan has these relationships and receives the support needed to deliver great applications and get their approval.

Permitting & Permissions Team

The permitting and permissions team is headed by the land team in cooperation with the solar team. The focus is to take the solar design plan and get all of the permits and permissions needed to be ready-to-build. The team reviews all of the official land category of each parcel for the solar project and prepares to request for land category changes when necessary.

The following are key laws and acts to be checked for each solar project:

a. Forest Act
b. Natural Parks Act
c. Load Act
d. Act for Improvement of Agricultural Promotion Areas (AIAPA)
e. City Planning Act
f. Building Standard Act
g. River Act
h. Environmental Assessment System Act

6 -- US EMBASSY TOKYO GOES SOLAR

US Embassy Housing Compound -- Roppongi, Tokyo

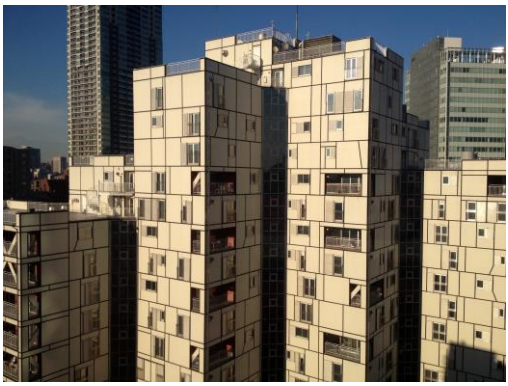
This will be the hardest dollar I ever earn. If I get to earn it. I am closer on the bet than Nishida-san is. But, still I am dealing with the US Government. This is not an entirely logical exercise. It is only done out of pure entertainment. As an entrepreneur, I would normally never ever engage with the US Government.

I bet I can get solar on the US Embassy Tokyo before you get solar on the Emperor's property.

So, I figured for Nishida this would require him to write on rice paper in beautiful calligraphy. I knew that I would have to ask. ask. ask.. ask again.

The first time was early in 2012. This is because an a veteran American entrepreneur doing business in Japan I checked in with the US Embassy Tokyo's commercial attaché. (I always want to call them a briefcase. Is that just me?) Anyways, I met Mr. Greg Briscoe and Mr. Suzuki and we talked about solar in Japan and besides getting an "attaboy Brad" I would actually like to put solar on the Embassy.

Smiles and pleasantries exchanged! Of course. I know it sounds written as sarcasm, but it was actually very cool. The US Embassy Tokyo has been a support tool that has helped me since 1989 in Japan. Here in 2012 was no different.

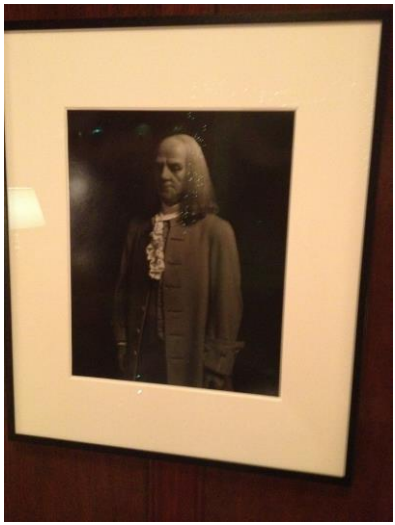


Good.

This pursuit of the US Embassy Solar project introduced me to some wonderful and talented people. Experts in hydrogen, solar, finance, markets, Japan tax and government contracting.

US Japan Renewable Energy Roundtable.

Me and Ben Franklin



A reception at the US Ambassador's residence was a nice detour on the daily grind of starting a new business. Obama's man in town has been very pro-active in promoting and engaging with American business in Japan. Kudos and best wishes.

The roundtable team toured Sendai and other Tsunami hit areas. This solar plant is at a science university that had its first floor wiped out. This array is 2MW.

The solar array is next to the bay in Miyagi. The concrete bases are then attached with steel racking bases to form a ballast mounted system. The interesting design flaw, at least to my eye, is the solar panels are attached to the racking using the grounding holes on the back of the solar panel. The steel racking is substantial, the connection at the solar panel frame is weak.

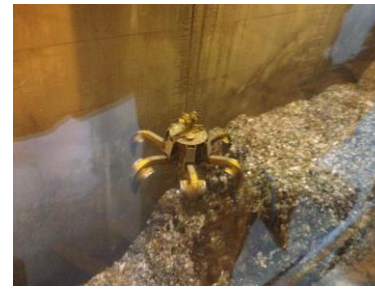
The location and hospitality of the hosts at the science university were terrific. After this tour we went into a class room to learn about the dramatic events on March 11, 2011 and were shown actual utility monitoring of the grid. It showed the earthquake hit point because all power ceased.

During our US Japan Renewable Energy Roundtable we also visited a 2MW solar site in Kawasaki. This location was next to a waste heat recovery to electricity plant.

We toured the inside and were mesmerized by the giant claw picking up garbage and dumping it into the furnace. The ash was used to reclaim the land that house the solar panels!

To the left is a art piece made of garbage from this facility. I really was looking for the place to put in my 100 yen coin to be able to operate the giant crane.

This solar array was also using concrete blocks, extensive steel racking to connect to the solar panels at the panel frame grounding hole. The concrete blocks make sense as it is reclaimed land. The steel racking is extremely heavy duty and looks to be way overkill for solar panel racking. The connection point to the back of the panel frame again showed me the need to be here.



Our team is focused on the hardest part of the solar business, taking land through the development process and getting it Ready-To-Build. This is a hole in the Japanese market now.

There are plenty of investors that will put funds into low-risk Ready-To-Build projects. Very few players, except vertically integrated solar companies like Kyocera or Mitsubishi are taking the risks needed.

We have combined the resources, experience and teams of our companies to have a one-stop turnkey service of finding solar capable lands, vetting the stakeholders, designing the solar systems and managing the project thru the application, permission and permitting process.

Our key strengths are:

a. Land and Project Finding
b. Best of Class Solar Design, Supply and Installation
c. Permissions and Permitting Teams
d. Tax, Financial Planning & Special Purposes Vehicles
e. Real Estate Land Management and Transactions
f. Construction Bid and Process Management
g. Solar Asset Management
h. Investor Relations

By combining the roles into one organization we achieve operational efficiencies and further strengthen our capabilities.

Problem: Very competitive market

Solution: Lease land during permitting and development

Costs: 50,000 USD MW to reserve and permit

Risks: Land not permit-able

Rewards: Every 1 million USD investment secures 25 MW of solar

7 -- KEY READY TO BUILD INVESTOR REQUEST

The key Ready-To-Build investor request is the bonding of the bids for civil works and EPC costs. Our team has the knowhow and experience in this area.

There are six key areas that investors can participate and profit from the solar market in Japan. Each subsequent area is less risky leading to 20 year government backed revenue streams from operating solar electric generating plants. These six areas are:

Real Estate - Solar REIT

FIT Approvals - METI & Utility Company

Development - Permitting and Permissions

Notice to Proceed - Construction Finance

Selling the Asset - Investment returns by selling project at COD

Keep the Asset - Up to 40 years of revenue

Business and Permitting Processing … **(It's a long, long road)**

8 -- 46 KW YAMANASHI SOLAR FARM

46KW Yamanashi Solar Farm
42 yen FIT

Featuring 190 Solarworld SW245 Poly panels, 11 SMA Japan Inverters and racking by Schletter of Germany.

Built and Designed by ABC Solar Japan KK
www.ABCsolar.jp - 03-6277-6513

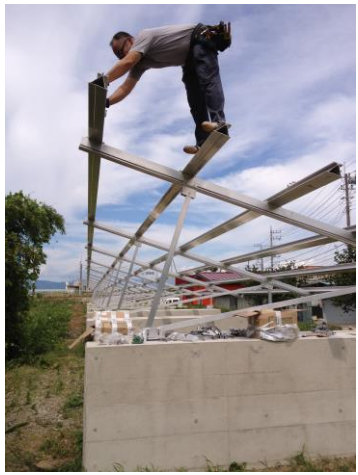
This 46 KW Installation is in Yamanashi Prefecture Japan. It features concrete bases poured in place, Schletter racking and 190 SolarWorld 245 watt solar electric panels. The solar panels are connected to 11 SMA of Germany to connected to the TEPCO grid.

The system is expected to generate about 6,000 yen per day over 20 years of income of the owner

The German designed racking from Schletter was a pleasure to work with.

The PV Max system is made for use with concrete blocks. The concrete acts as a ballast to hold the solar panels against very high winds.

The racking is designed for specific solar panels so the rail mounts were pre-assembled by Schletter. This allowed quick attachments of the rails and easy adjustment to be perfectly straight.



These 245 watt solar panels were made in Oregon, USA and imported to a Yokohama port. The panels are made by SolarWorld and are of the highest quality in this class of poly crystalline solar panels.

This site features 190 panels using the PV MAX system from Schlettler of Germany. The racking was made in China by the Schlettler team. The panels are configured into strings of 9 panels by two strings per power conditioner (Inverter).

SolarWorld 245 Poly Solar Panels. The Solar panels hang 42 centimeters off of the Schletter racking. This is the same on the opposite end of the 19 panel racking set.

This job has two rack sets of 19 wide by 5 panels tall. 14 concrete bases were designed, framed and poured on-site. The concrete acts as a very stable racking base that allows perfect lines for the solar panels to spend the next 30 to 40 years. The concrete also acts as a ballast mounting.

SMA Japan's Power Conditioner

ABC Solar has been installing with SMA Inverters (Power Conditioners) for 12+ years. This is the gold standard in the solar industry with its German engineered products and the best customer support in the business.

The power conditioner is designed to change solar DC to grid ready AC.

Schletter Inverter Racking

The SMA 4500 TL power conditioner has a mounting plate that will be attached to the shown inverter racking gear. The solar panels will be configured in strings of 9 panels and two strings will connect to each power conditioner.

The 11 Inverters will then be fed into a sub-panel with 12 fuses at 15 amps each. The output from the sub-panel will then go to a master disconnect switch and then connect to TEPCO grid.

The right tool: The Crimper. The panels are connected to each other from positive to negative over the 9 panel string. Each connected panel adds voltage and the current (amps) stays the same.

Each SolarWorld 245 Poly panel is 37.5 volts open circuit (VOC). This means a 9 panel string is multiplied by 37.5 to reach the string voltage preliminary total. That number is then multiplied by correction factor that counts local weather of hi and lo.

A 20 Year Revenue Stream

The Japanese Feed In Tariff will pay 42 yen per kWh this system produces over the next 20 years. On average this system will make 57,000 kWh a year. That is 6,000 yen in daily revenue.

The solar panels have a 25 year warranty on power performance.

Operations & Maintenance

Japan is a jungle. The life thrives and grows everywhere. The O&M plan is first to tuck away the wiring to make it less tempting for the vines to wrap around. The owner, Brian, will do periodic weeding and trimming.

At least it has pretty flowers.

Hungry! This is Ramen TonTon. Basically the solar system will power all of the electrical needs of this ramen shop. Ramen TonTon is only open during the day so this really does mean that these will be solar noodles!

9 -- OUR BUSINESS MODEL

Our business model is to find solar capable lands, vet the stakeholders, secure FIT, Utility PPA and all permissions need to be called a Ready-to-Build project. We engage with our RTB investors early in a project's life cycle so we can know there is money to be made from our efforts. The following is our basic timeline for solar project development and sales to

RTB investors.

Project review and presentation development	1 week
Internal project review by our investors	2 weeks
Letter of Interest from Investor to get exclusive period for due diligence	1 week
Exclusive Legal Due Diligence and Permitting Period	3 to 6 months
Negotiation for Tetsuke-kin (escrow) and preparation of trust account	2 weeks
Bank Financing package, study and approval	3 weeks
With 100% approvals and financials ready – real estate and deal transaction	2 weeks

Each of the above time estimates will be shorter or longer. The key to success is access to all available project information AND gathering of new information that is required to satisfy the legal due diligence process. Our teams have a 100 point checklist that each property must pass before being presented to our investors. We work very hard to have clean projects and the details necessary for successful review.

Our process includes:

Anti-Social Checks
Land Owner
Brokers

Anti-social checks are done by access to databases naming potential bad guys. The process is also supported by internet searches and behavioral patterns of stakeholders.

FIT Applications
METI
Utility

ABC Solar Japan does the initial system design, layout, single line diagram and uses these for the METI and Utility PPA applications. We work with vendors where possible to lower workload.

The METI application takes about 1 month to positive answer, the PPA takes 3 to 5 months. We work closely with the utility company to design our applications to their needs.

Land Survey and Design
Land Survey
Digital and printed topography maps

Once a project is moving, with the RTB investor's interest confirmed we start the construction document design process. The land survey is a requirement in most jurisdictions for use in applications to the Forest Committee to seek approvals needed by the Forest Act. The survey and maps are also vital to construction planning and bids.

Land Category
Check parcels and categories
Change for Solar use

The land Category and permitting process is controlled by a series of national, prefectural and local laws. The following are considered for every project. When a specific law applies our team and 3rd party providers create the documents needed for submittal and approvals. More details on this process is included in the appendix.

Act for Improvement of Agricultural Promotion Areas (AIAPA)
Agricultural Land Act
Building Standard Act
City Planning Act
Environmental Assessment System
Forest Act
Natural Parks Act
River Act
Road Act

Construction Documents
For permitting
For contractors

The most important documents created for a successful solar project are the land preparation, electrical and construction plans. This is where our team's extensive solar design, installation and construction management

really shines. Good plans lead to on-time and on-budget projects.

Construction Permits and Any Local Permissions Needed

Our final steps are to get the local construction permits to call a project officially Ready-To-Build.

Land Transaction MOUs,
Lease Agreements
Purchase Contracts
Registration of MOUs

In parallel to the above activities our team works on a variety of transactional documents needed for real estate and the financial investor. This effort combined with the above works is what we are raising monies to do. Our team is experienced and has the track record in all aspects needed for solar success.

The Ebisu Station statue is a standard meeting place in Tokyo.

This is the Japanese God of good luck to fishermen and workingmen.

I do a lot of writing and planning sitting in front of Ebisu. To me he does provide luck to the (ad)Ventureman too.

10 -- SOLAR AND ITS TECHNOLOGY

What is Solar?

Solar electric panels are the result of work by Albert Einstein. Einstein won the Nobel Prize in Physics for his declarative work on the "photovoltaic effect" in 1921. The gist of his paper is that the photons from the sun's light will "knock out" electrons that can be channeled into an electrical current. Basically a fist fight on a microscopic level between photons and electrons that makes direct current electricity that is inverted to AC grid capable power. From raw silica to solar cells, inverters and batteries. It Works!

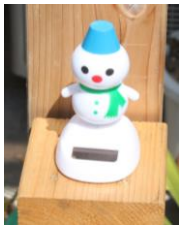
Wire size is determined by amperage, voltage and distance. The bigger the wire the more money you are spending. At ABC Solar Japan we calculate with a safe buffer to allow "Right-Sizing".

How are solar panels made?

The production of solar panels involves six main steps from mining the raw silica to the assembly of the solar panel. You can think of a solar panel like building a sandwich. The solar cells are the main ingredient that are then sealed inside glass and encapsulate. The manufacturer can keep the majority of the process identical while upgrading the solar cells when more efficient ones are available.

The majority of solar panel manufacturers have a labor intensive methodology. Some have automated the manufacturing and integrated extensive quality control testing during the process.

Our team is 100% focused on using the best solar panels available on the market. The primary reason is that our solar projects are designed to live and operate for 30 years. The selection of materials is key to long-lasting systems that require the minimum of maintenance to keep operating and generating revenue



The solar panels made by Sunpower Corporation are stated to generate the equivalent of the power needed to make the panel in 1.4 years. All of the solar panels we use come with a full 25 year power production warranty and many have a 10 year manufacturing defect warranty. Again, our team focuses on quality solar panels to ensure long-lasting and generating solar farms.

Inverters and Balance of Systems

The inverter (power conditioner) is the brain and heart of any solar plant. The inverter takes the naturally occurring DC electricity generated by the solar panels and inverts it to grid-quality AC power. The picture on the right shows a 4.5KW inverter from SMA of Germany. This inverter has the capacity for 5,500 watts DC of solar panels and has an operating efficiency of 96%. This means that it changes 96% of the power generated by the solar panels to AC electricity. The balance of system, wire and other factors determine the ultimate efficiency of the whole solar plant.

Inverters come in sizes from 100 watts to 2MW. The larger, commercial inverters are combined in parallel to build up a solar farm. Step-up transformers are then used to up the voltage to match the grid-connection point. In Japan this is 6.6kv for systems below 2MW and typically 66kv for systems that connect to high-voltage towers.

The installation method is determined by the land and our design team. The following pages will show a ground based system in Yamanashi, Japan that is using concrete bases as ballast. Where possible we design using a ramming method that pounds steel I-beams into the ground at depths of 2 to 4 meters, depending on the density of the soil. We can also use very long ground screws that literally screw into the dirt. Once the concrete base, I-beam or screw is installed a professional solar racking system is bolted into place. The solar panels are then attached to the rack using top-down clamps that are rated for high-wind and their structural capabilities.

Once the panels are in, the electrical teams connect the panels into string sets. Each solar panel has an open-circuit operating voltage that ranges from 30 to 70 volts DC. The Inverter has a max DC input voltage that we design the string size to. For example, the ABB 500KW inverter has a max input of 1000 volts. So with a 30 volt solar panel we correct for the lowest temperature known at the installation location and apply a temperature correction factor. The colder it is the higher the voltage. Typically this is a multiplier of 1.13. So a 30 volt solar panel is actually considered to have a max open circuit voltage of 33.9. This means the max size of our string can be calculated as 1000 / 33.9 = 29 panels in one string which is 983.1 volts DC.

The strings are then combined in parallel to the max current input characteristic of the inverter. Once the inverter does its magic and changes DC to AC the output in connected to a step-up transformer to go to 6.6kv. For systems larger than 2MW a sub-station is built that will take the 6.6kv and step it up to 66kv for the final grid connection.

Each solar panel string, the inverter and the final grid output is connected to web-based monitoring systems. This allows our network technicians, investors and stakeholders to see production and operations in real-time. With good planning, supply choices and installation we can expect the solar system to continue generating electricity for 30 or more years.

Operations & Maintenance

It's a jungle out there. In our minds the key to long-term max production of a solar plant is consistent maintenance of the systems and grounds of the plant. Our web-based monitoring of the solar panel strings, the inverter and system production allows us to keep close watch on performance. The monitoring system also emails/texts our technicians if there is in anomaly or issue with operations.

This T-shirt has become a rock solid principle for ABC Solar Japan. Our mission is part of Fukuhima's. We are part of Fukushima. This statement says it so very well. FUCK YOU - WE'RE FROM FUKUSHIMA. Join our driven solar (ad)Venture. Go Solar ... Get Laid.

11 -- WE ARE FUKUSHIMA

The emotional part of being in the solar business in Japan is feeling the damages done by nature and man. The sea just wiped clean all that it passed. The atom just hot, hot, hotter and out of control as the continued meltdown of Fukushima occurs.

On the bullet trains you check your iPhone radiation checker and wonder about the stray dogs left behind.

The stop at Fukushima station seems to take longer than it should. You almost hold your breathe. The platform looks the same, the air the same, the people remind me of a stunning youtube video 20 minutes long but shot at hyper speed and shown at super super super slow motion. The taichi float.

I am motioned to get off. We go and visit a 20 MW site and then see potential land for 400MW. We notice on the way the solar powered radiation detectors. We snap selfies with them as foolish tourists do. Scared, amazed and determined. I am determined to install and help my competitors install so much solar we can go off nuclear power.

After Fukushima station we board again and out the shinkansen window I look for solar installations. I gaze as my eyes go black and bright through the vast tunnel network. At speeds that are hard to feel we whisk past the stations and land in Sendai for our site visit to 1 million square meters.

The **Dicks** in Tokyo (the other ball is not pictured) have left devastation. The dicks in Tokyo will build giant sea walls, but not rebuild in new, safer places for the people. Instead the dicks in Tokyo let them rot in old shipping containers.

This solar powered nuclear detector was one of many we saw on a trip thru Fukushima. This particular unit was located on a big flat plane that was going to be a new capital of Japan. They thought of moving Tokyo here! Not anymore.

The visit to Fukushima was accented by an overnight stay in Ofunato, Iwate prefecture. We stayed on the fifth floor of a hotel that was flooded to the fourth floor during the 3-11 Tsunami.

The devastation was visible and shocking. The twisted steel and boats on top of 3 story buildings. Still perched like the captain meant to park it there.

This tree is the ONLY survivor of over 70,000 pine trees that populated this area the morning of the Earthquake. This tree has been preserved in metal to stand as a symbol. These picture are still very emotional for me.

The energy of engagement in Japan for energy independence comes from the old and wise. This gentle soul was at the corner across from the main police station in Tokyo and all the government buildings of Kasumigaski. Her smile is power.

Iwate prefecture is the largest most unpopulated prefecture in Japan. The beauty has feelings of 17 mile drive in Monterrey California and the fall colors of Vermont. The ocean is stunning with cliffs and long bays and peninsula.

I highly recommend a stay in Tohoku. This is a very lovely part of Japan and the people.

12 -- SOLAR PORN

ok, pardon my French. But the new addiction at the company is finding and taking pictures of Solar Porn. This High-Voltage tower is right in the middle of the target 20MW solar property. This means that our grid-connection expenses are greatly reduced and thus the value of the project leaps.

In summary there are several ways to backfeed and interconnect to the Japanese utility grid and qualify for the 20 year FIT.

1. 66,000 volts - this is the typical high voltage connection to feed solar plants larger than 2 MW up to 90 MW.

2. 22,000 volts - this is typically a commercial interconnection voltage.

3. 6,600 volts (6.6kv) - this is for solar systems larger than 50 KW but smaller than 2MW. This is the sweet-spot for solar in Japan.

4. 400v, 200v, 100v are all below 50KW size connection voltages.

The grid-connection voltage is determined by your AC output, inverter and transformer combinations. 400v ->6.6kv ->22kv ->66kv.

Sometimes a client wants me to break the laws of physics. It is Einstein's Theory of the Photoelectric Effect for which he won the Nobel in Physics that wins.

--Regardless. What a view!

Custom Commercial Clean Capacity Capturing Cash

This rooftop is a patio cover for the Agora Regency Hotel in Sakai, Osaka, Japan. We look to install 600 Sunpower solar panels at 327 watts each on the south side of the glass. The grid connection should be at 400v but we are negotiating with Kansai Utility. They want us to connect this system at 22,000 volts, basically an uncalled for technically un-needed requirement.

13 -- JUST A REMINDER – ITS JAPAN!

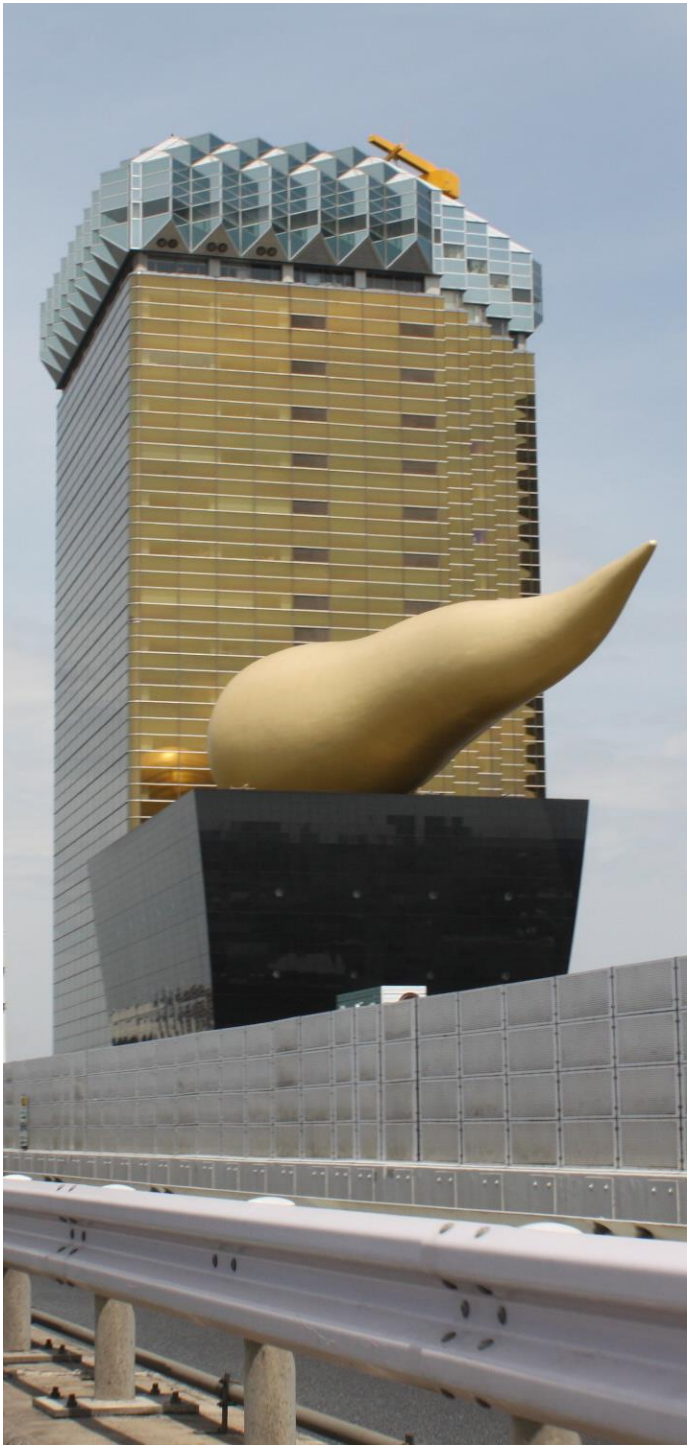
Just a reminder…

The new Tokyo Skytree towers 450 meters from its top observation deck. At these heights you are able to see 40,000,000 people full of naked roof tops that will all be solar in the next 10 years.

The massive adoption occurring in Japan is following a road map laid out by METI (Ministry of Trade and Industry) in the early 2000s. The focus continued with the military's understanding that every kWh produced by natural resources in Japan makes Japan more secure.

Japan will make 100% of its energy with renewables. It can happen.

Kansai has some of the most bitchin trains in the world! This "Darth Vader" looking train whisks you from the floating international Osaka airport to Sakai Station where our solar team measures the Agora Regency Hotel.



I Lost this tie at Geronimo's in Roppongi Tokyo. The line for my efforts in Japan is not fiber optics.

I can read that line again and again and not know what it means. But this section of the book is in a bar so what the heck!

Japan is one big bar crawl.

The trains and taxis make it safe and the smiles make it memorable.

I also enjoy Tokyo for the endless variety of ways to entertain yourself. I am all smiles at the local golf practice range.

Because of the automatic ball setter I could hit 200 balls in an hour! Just whackin' away felt really good. I was using a new set of clubs I bought at a garage sale at the US Embassy Housing Compound. My first time with a driver as big as my foot.

14 -- PRE-EMPTIVE SOLAR MAINTENANCE

Pre-emptive maintenance, such as panel cleaning, wiring and inverter checks has been shown to increase annual output by up to 8%. This is bonus revenue that the stakeholders and investors benefit from. By watching production and understanding the annual weather patterns our technicians can remotely know when cleaning needs to be scheduled. Cleaning is needed more often in drought or extended non-rain periods.

Goats or Sheep?

Many solar companies use grass munching animals to keep control of weeds at a solar plant. This key choice is to use sheep as they only eat down. A goat will eat anything, including the solar wires. Unless you want to BBQ your goat we strongly suggest sheep.

Japan is a jungle so making sure your long-term plan includes brush removal. It is vital to successful operations.

Panel and System Warranties

We only design and build solar systems using the best quality materials available.

The solar panels we use are the highest quality available. Each manufacturer gives a 25 year warranty on power production that states the solar panel will be producing at least 80% of what it produces on day one in twenty five years.

The inverters have 1 to 5 year standard warranties and options can be purchased to extend warranties up to 20 years. We always push for the full 20 year warranty protection on our projects. The inverter is the brain of the operation is the most likely component to fail.

Installation warranties vary by the EPC doing the work. Solar Production warranties can be supplemented with insurance from companies like PowerGuard.

Safety First

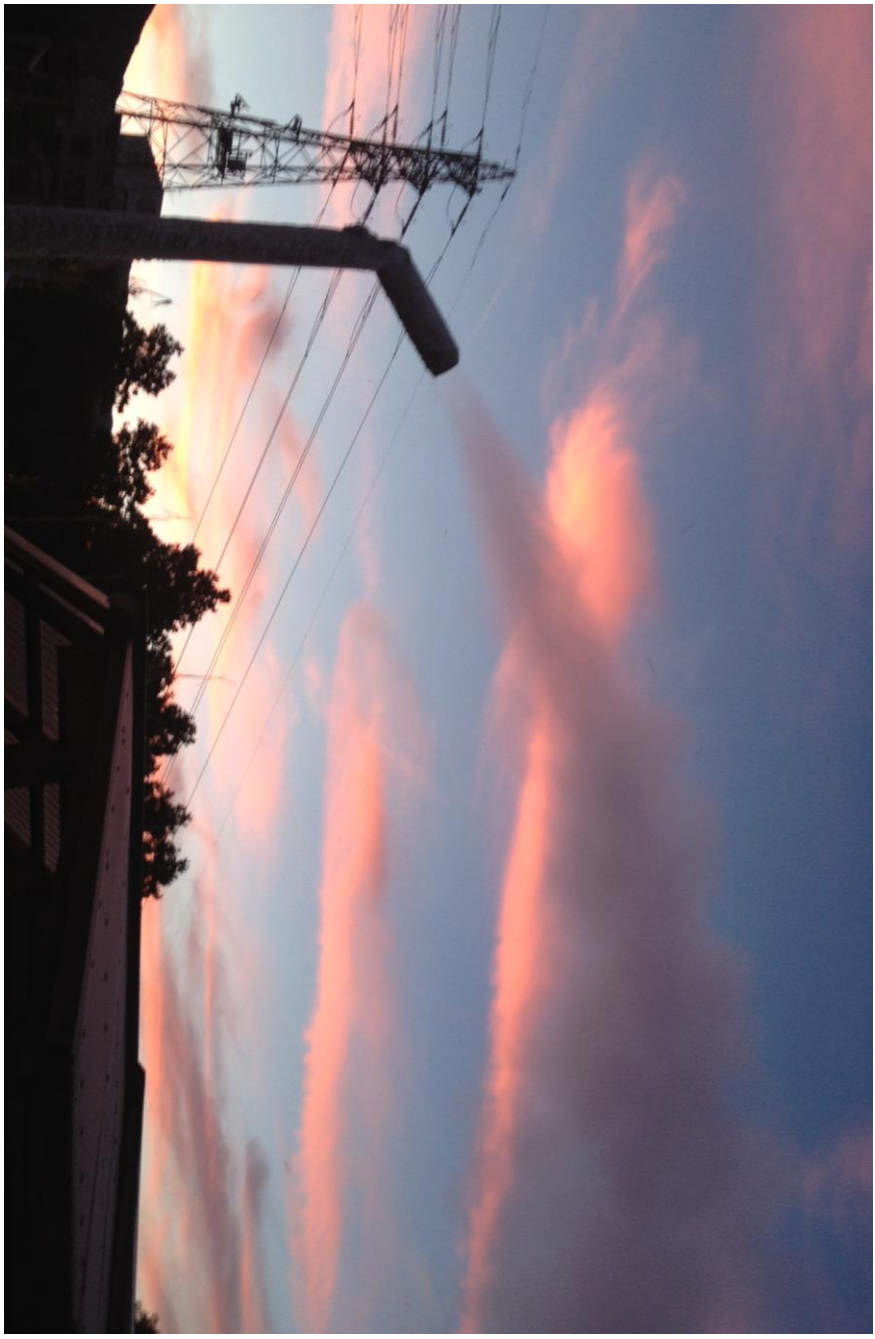
There is a very good reason you see so many safety staff on a job site in Japan. The stress on safety of the workers is not a second thought for authorities here. Basically if someone gets hurt on your job site the police might be called to do an investigation.

If the police decide to investigate your job site then you cannot continue working, you cannot fire any staff and you have to keep paying payroll until you are cleared or the investigation is over, whichever is longer.

Safety on the job site is more than a tailgate meeting with the workers once in a while. It is a daily planned activity that anticipates issues and addresses them with caution.

The sign below says, "Abunai!". This means very dangerous. The splash into an irrigation pond on our 40MW site.

It's Not Just Solar ...
Geothermal is hot too!



15 -- 24MWAC SOLAR SITE IN GIFU JAPAN

24MWac Solar Site in Takayama, Gifu Japan.

This 1,000,000 square meter site is cleared forest land that is ready for final solar civil works and then installation. This site is facing north so our solar will be spaced and tilted to the south. An access road will be cut on the southern tip of the property. Besides finding solar gold we found edible mushrooms. What I like most about doing solar in Japan is the many place I get to visit.

FALL'S BLESSING

16 -- 40MWAC SOLAR SITE IN MIYAGI JAPAN

This Miyagi site is 880,000 square meters of unused forest land that is basically sloping south.

The Solar Team spent all day touring this property. The focus is to walk the property line and identify small concrete line markers. Some which seem to be hundreds of years old.

We started at the North West corner and hugged the west wall. I say wall as we discovered what we called the "Great Wall of Miyagi". It certainly felt like we were the first humans here in a very long time. The wall was a dirt berm that did follow the property line.

On one side a valley to the west and the rest of our solar property lies to the east of our position. We turn left and head into the middle of the property. We wish that we has machetes to cut the jungle growth. Vines just grabbed at your legs. This first portion of the site visit was a tough sludge through the forest with our technicians calling out GPS coordinates

every so often like gold miners.

Then, after sliding in the mud down several hills we hit the jackpot! We stared with smiles across wide building pads for our solar farm.

The contour of the site and the civil works plan starts to make sense as we continue to mark boundaries. With solar we can shape our mounting structures to the curves of the body. Ooops Freudian slip. We can shape our mounting systems to the ground.

The loam soil at this site makes earth movement and ramming solar mounting I-Beams ideal. In 40 years when this solar plant is ready to retire the majority of materials can be recycled and the I-beams are pulled out of the ground. Our goal in solar system design is to work with the environment. We do consider carefully how to layout our solar arrays and the accompanying fences to the egress of critters that live here.

Solar is a different form of farming.

Our intent is to shepherd the land and make clean renewable power from the sun.

The Miyagi site visit found a string of building pads and the team form the plans for 47.8 MWp of solar panels, almost 200,000 solar panels connecting to almost 24 Inverter stations at 2MW each.

Each ABB 2MW Inverter is enclosed with needed 6.6kv transformers and necessary safety switch gear. Basically we pour a concrete slab to spec and then place the Inverter and wire the waiting pre-wire receptacles. Major utility scale solar plug and play!

The Japanese code allows for 1000 volts or higher on the DC side of the inverter. This means we can have bigger strings of panels and smaller wire. This also helps in the implementation and cost control of solar electrical installations.

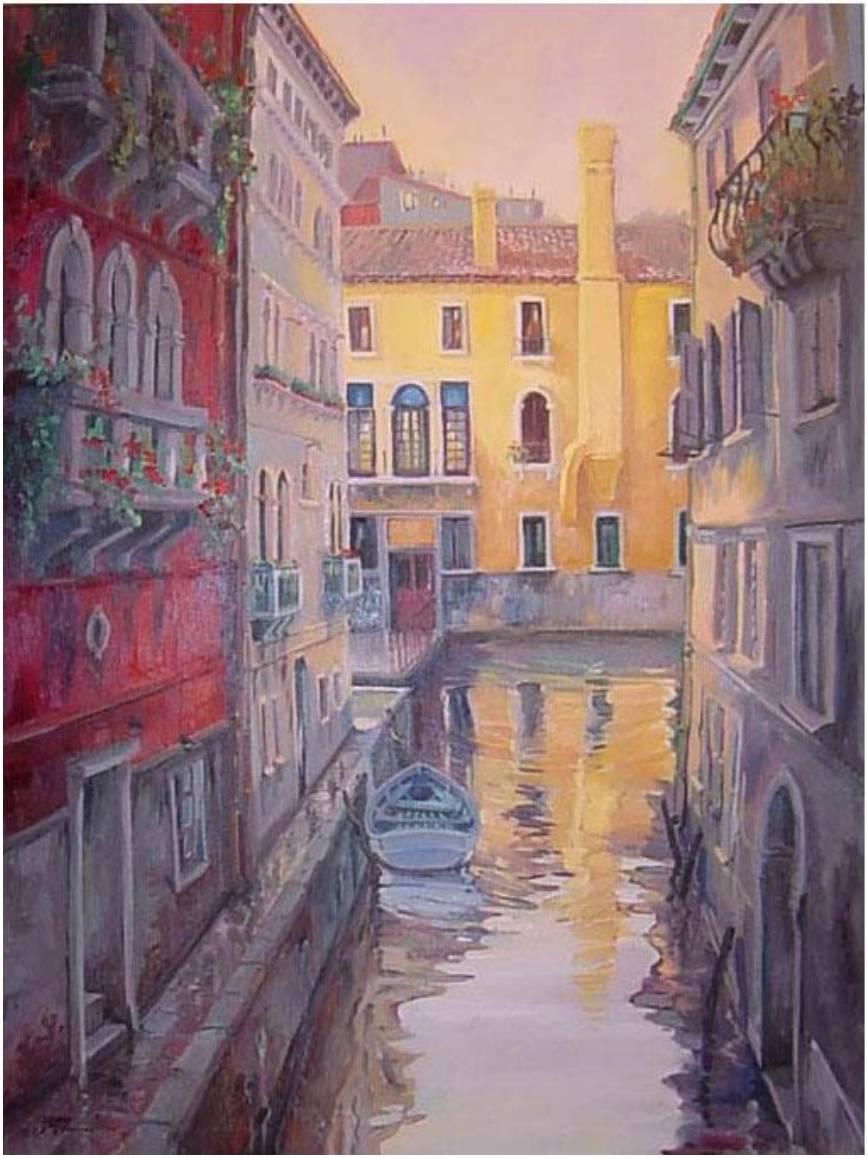
We will build out the 47.8MWp in 2MW segments and link sets to step up transformers in three sets of 22,000 volts. These are then put in series to step up to the back feed voltage of 66,000 volts.

When you see the look on the solar team 's face it does feel like we found gold. Our focus is to document details of the site and then translate into construction documents.

This Miyagi site is designed for 40MWac. It is 1,000,000 square meters that is generally sloping to the south. There are many building pads like the one you see above. An aggressive civil works plan will remove non-used farming assets like irrigation ditches and transform the site into a world-class solar grid-tie system. This land has not been farmed in a very long time. The trees will be cleared.

The grid-connection point is a 1 gigawatt substation that is 800 meters from the property as the crow flies. More than likely we will take the longer route and dig a trench along the 2km of road. Our 40MWac will backfeed at 66,000 volts from approximately 200,000 solar panels connected to 24 grid-tie inverters at 2MW each.

This Site will be a world-class Utility Scale Solar Farm that can power almost 50,000 homes during its production day.



THIS IS ONE OF MY MOM'S PAINTINGS THAT IS ONE OF MY MANY FAVORITES. THIS IMAGE IS HERE TO ALWAYS REMIND ME OF HOME AND MY ROOTS. SEE MORE ARE AT WWW.BARTZ.COM/STUDIO . SHE IS DIANE CLAPP BARTZ.

17 -- STEPPING STONES

Stepping stones, blockages, art. Sometimes rocks just mean something different to many people. Maybe that is all the time rocks mean something different.

At the Imperial palace in Tokyo these stones are used as a protective barrier that comes to represent access to the Japanese market for me. There are barriers if you decide you can't side step and walk right thru.

On that day I also jumped on each rock and in my mind each one was a sales prospect. On each I would recite a mission statement for ABC Solar Japan.

One cell at a time...

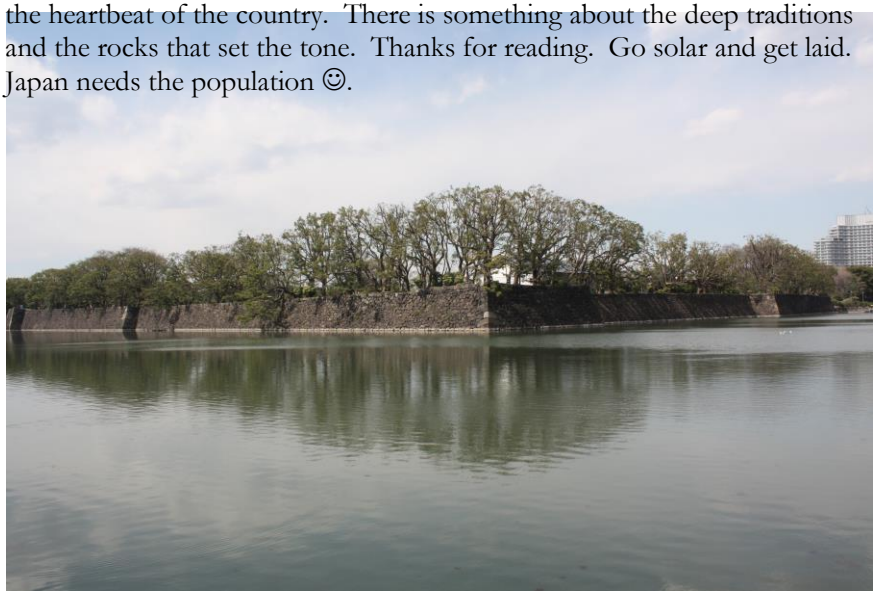
Jump
To make the business boring...

Jump
Install 1 million solar panels and leave a company behind that does the same...
Jump

Learn how to love again. (Being an entrepreneur is a lonely experience.)

The last paragraph being written in the book is in a fitting place. Between Kyoto and Tokyo. A 3 hour ride by Shinkansen from Tokyo to Osaka, many folks seem to miss the opportunity to stop time. The Golden Pavilion is a breathtaking and site of solitude. Even with the mass of tourists the beauty captures each of us individually.

The stately imperial palace wall and moat in Tokyo sometimes does feel like the heartbeat of the country. There is something about the deep traditions and the rocks that set the tone. Thanks for reading. Go solar and get laid. Japan needs the population ☺.



These steps have been taken before. The (ad)Venture man knows that many souls have been asking for guidance for many, many eons. This image represents that steady climb needed with these wise support arches that seem to float.

You met Wayne Shaw early in this book. Like me I met Wayne early in my Japan career. It was at an antique furniture warehouse just outside of the Ginza, Tokyo. Wayne always says, "if it don't kill ya, it makes ya stonger mahn."

Then he fed me chicken fingers.

It reminds me of a song:

When you find your sun is steady
When your roof is new and ready
When your electric' bill is giving you a licken'
There is someone waiting who will spin your meter backwards...

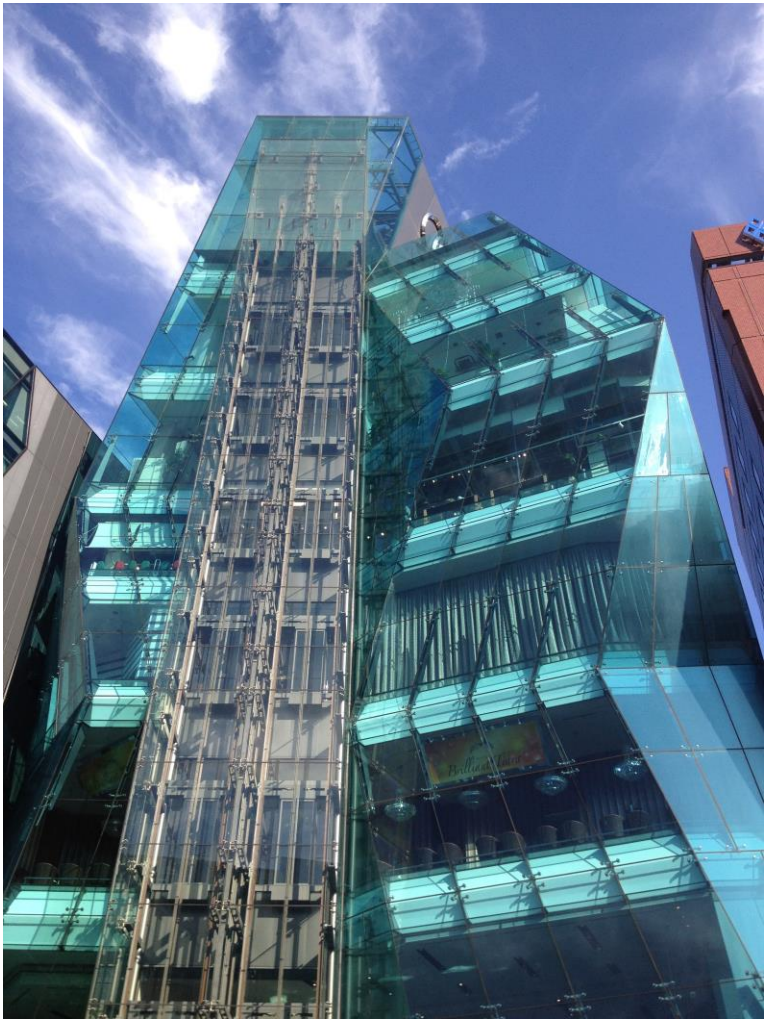
Just call Solar Chicken! SolarChicken.com.

Wow, the designs in Tokyo just mesmerize and make the creative juices flow. I sat in the Starbucks across the street and just gazed. The lines meant to induce curves, the white clouds just caressing the image.

Welcome to TOKYO!

The Audi Building in Harajuku, Tokyo. This shot was taken after visiting Kyocera Solar. The relief of seeing art after that stark meeting was welcome.

Sometimes a Japanese business meeting just needs a little David Lynch direction. I always think about red velvet and Twin Peaks. Just conversations that are ghostly. A white table, white room, and I imagine an investigator's police lamp. I add to that the Kyocera guy appears to be behind one-way mirror glass and there is no doorknob to exit the room. Hmmmmm.



18 -- WHAT'S GOING ON TEPCO?

This is the most popular phrase in Japan. This sticker was on a power pole in the fashionable Omote-Sando District. It goes along with our funny website at FuckTEPCO.com

Buy a T-Shirt!

Fuck TEPCO.

It will make you feel better.

Fascination with Tokyo is the modern, the hip, the old and all in walking paths. The city is as small or as large as you want it to be. Here I reach thru a 500 year old wall to grab at what might be there. This is in a park right next to Hamamatsu station which is the home to the Tokyo Monorail. When you get to Japan, explore, walk and enjoy.

A dummy for a safety training exercise at the Agora Regency Hotel. Sometimes I wonder if the dummy just has a better life?

The Temple of the Golden Pavilion

I met Yukio Mishima.

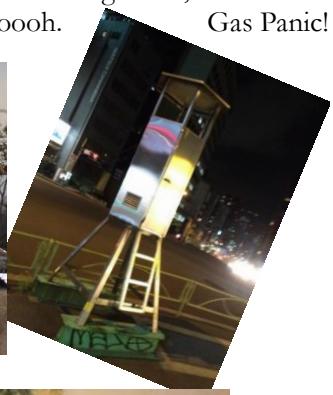
Really I did. He works at Mitsubishi Electric and Mr. Mishima is in charge of solar for the keiretsu. To foreign Japan watchers the famous writer Yukio Mishima is dear to our reading time. Like Way of the Samurai.

The author Mishima had his own private army and hit the control freak button just a few too many times.

Meeting a real life Yukio Mishima was capped off with his invitation for a night with geisha and maiko entertainment in the Asakusa district of Tokyo. In Japan since 1989 this is my first time to be able to see the real pleasure district of Japan in 2012. Thank you Mitsubishi!

Tokyo Tokyo + Hachicko in Shibuya + (Mike Fink + Brad Bartz) + Police Box = A pretty gosh darn good time! Friends since August 23, 1989 where we met at the original Gas Panic bar. Ooooooooh. Gas Panic!





The Ita Ladies! At a fireworks party at Mamoru's place. Stunning!

The rides in Tokyo Subways and Trains can be very entertaining. After sleeping on a couch bed in Azabudai Tokyo for a year I finally went to Ikea and bought a real bed. It was like being human again. My sleepy dreams were restored. Ikea is MILF central and walking against the flow is a must.

But before I made it home I spotted Arnold Schwarzenegger and Danny Devito doing a remake of their movie Twins as old Japanese salarymen…

Don't trust the government, television, big company and nukes. This is painted on the wall of the Pink Cow in Roppongi, Tokyo. I snapped this picture after giving a speech about being a foreigner doing business in Japan called "The Act of Godzilla Clause."

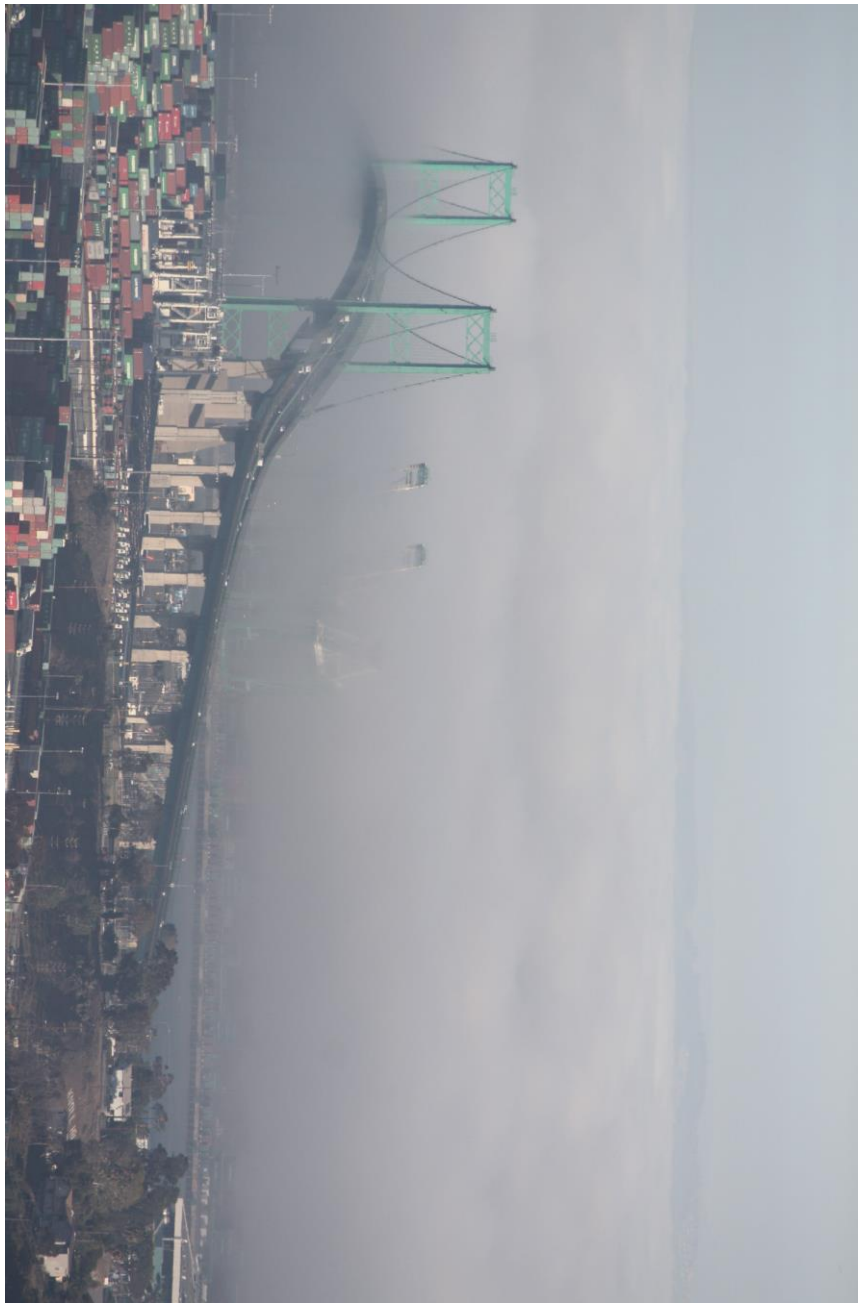
As a solar guy I have learned that the government lies. It changes the rules, it does not know the rules, it has a vendetta and wow, did I tell you that government lies?

The truth is solar works. The sun shines every day and the amazing photoelectric effect changes photons into energy for our use. Solar works.

Sometimes, like the string puppet art pictured to the right (snapped at the Mori Art Gallery in Roppongi, Tokyo), the solar (ad)Venture guy feels like no one is there. Just black dark space. Oh... that was nighttime... Solar works! Just during the day. At night we use batteries.

The funny thing is the creative process. As this ABC Solar Japan book closes its first chapters, I see the need for more. More details on the details and more emotion on the victories and losses.

This is the view from my office in Los Angeles. It is a telling image for (ad)Venture people. Yes, there is something on the other side of that bridge.... I just know it.



ABOUT THE AUTHOR

Bradley Bartz is a veteran entrepreneur who has founded many companies over the past 30 years.

Mr Bartz is the Founder & CEO of ABC Solar Inc, one of California's leading DG solar businesses. Founded in 2000, ABC Solar focuses on residential and commercial grid-tied solar systems (www.ABCsolar.com).

Prior to ABC Solar, Mr Bartz lived in Japan from 1989 to 2000, where he founded the Internet Access Center K.K. (IAC) in Tokyo in 1991. IAC started and sold several businesses including an Internet service provider business, Japan Auto Abstracts, Tokyo Journal Magazine, Japan Press Network and the almost one-million users at JMail, a free email provider across a set of vanity .co.jp domain names. The first corporate venture of Mr Bartz was Telemarketing Visions Institute, Inc., a 501(c)(3) not-for-profit that he founded in 1986 to teach blind people how to sell on the telephone. Mr Bartz successfully placed his blind students in companies like IBM. IBM donated talking computers to TVI in 1986 which gave Mr Bartz the foundation for his Japanese Internet ventures. Mr Bartz also taught blind people in Japan these telemarketing skills

In 2012, in the wake of the Fukushima energy disaster, Mr. Bartz moved back to Japan to establish ABC Solar Japan KK. Mr. Bartz's intimate knowledge of building businesses in Japan combined with solar industry expertise has allowed ABC Solar Japan KK to effectively access the fast growing renewable energy market; network of quality solar suppliers, EPC construction companies and projects. Mr. Bartz's know-how have enabled him to excel at finding, screening and securing Japanese Megasolar land sites with a focus on the solar resource, grid access, fatal flaws, and quality of the stakeholders.

Mr. Bartz is married to a Japanese national and has two children, Bradley Jr. 21 and Marie 19. He spends most of the time between Tokyo and solar sites across Japan. He is graduate of Loyola Marymount University and is an active member of the local community via various school and community organizations.