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## **Bringing to Market their Solar Trees®, Envision Solar International, Inc. is Revolutionizing the Use of the 800 Million Parking Spaces Across the United States – Creating a Greener, Cooler, more Energy Efficient Environment**



**ENVISION SOLAR**<sup>SM</sup>

**Technology  
Solar Energy  
(EVS-OTCBB)**



**Desmond Wheatley  
President and CEO**

### **BIO:**

Mr. Wheatley has two decades of senior international management experience in technology systems integration, energy management, communications and Renewable Energy. Mr. Wheatley is a founding partner in the international consulting practice Crichton Hill LLC. Prior to founding Crichton Hill, Mr. Wheatley was CEO of iAxis FZ LLC, a Dubai based alternative energy and technology systems integration company. From 2000 to 2007 Mr. Wheatley held a variety of senior management positions at

San Diego based Kratos Defense and Security Solutions, fka Wireless Facilities with the last five years as President of ENS, the largest independent security and energy management systems integrator in the United States. Prior to forming ENS in 2002 Mr. Wheatley held senior management positions in the cellular and broadband wireless industries; deploying infrastructure and lobbying in Washington DC on behalf of major wireless service providers. Mr. Wheatley's teams led turnkey deployments of thousands of cellular sites and designed and deployed broadband wireless networks in many MTAs across the USA.

Mr. Wheatley has founded, funded and operated four profitable start-up companies and was previously engaged in M&A activities. Mr. Wheatley evaluated acquisition opportunities, conducted due diligence and raised commitments of \$500M in debt and equity.

Mr. Wheatley sits on the boards of Envision Solar International, Admonsters, San Francisco CA and the Human Capital Group, Los Angeles, CA and was formerly a board member at DNI in Dallas, Texas.

### **Company Profile:**

Envision Solar, is a leading sustainable infrastructure product designer, and integrator deploying clean energy systems globally. The solar design firm provides strategic long-term solutions and includes comprehensive sustainability planning and design optimization for its solar array structures. Founded by leading sustainable design architect Robert Noble, the

company is a leader in the invention and construction of solar structures that address millions of unused acres of parking spaces. Its innovative systems include products for commercial and institutional projects, such as EnvisionTrak™, CleanCharge™, Solar Tree®, Solar Grove®, Solar Row™, LifePort®, LifePod™, LifeVillage™ solar systems and others.

**Interview conducted by:  
Lynn Fosse, Senior Editor  
CEOCFOinterviews.com**

**CEOCFO:** Mr. Wheatley, you have been with Envision Solar International for awhile, but you are new to the role of CEO; what is your plan and vision?

**Mr. Wheatley:** Envision Solar International is a company that was founded by leading sustainable design architect Robert Noble six years ago. During the course of the last six years we have developed a variety of solar integrated building systems, but most famous amongst them are our Solar Trees®. Solar Trees are solar shaded parking structures. We invented the Solar Tree six years ago and have deployed them all over the United States. Our current vision is to concentrate on what we refer to as the Park Solar™ initiative, which involves covering as many of the 800 million parking spaces that there are in the United States with our Solar Trees as we can. We improve the built environment, create renewable energy from what is otherwise useless real estate and in general improve the lives of the constituents and we do this in the places where they park everyday. Our vision now from a strategic point of view is to focus the company's resources heavily on the

production and deployment of our Tracking Solar Tree product. Then, once we have created a firm foundation executing on that business plan, we will look at more aggressive and less organic growth strategies in the coming years within the renewable or sustainable infrastructure industries.

**CEOCFO:** How do people benefit from parking in a space that has your Solar Trees?

**Mr. Wheatley:** There are many ways. First, their vehicles are shaded from the elements while they park there. In areas where it is sunny and hot all the time you do not have to return to a car that is 180 degrees inside, because it has been baking in radiant sunlight. Instead, you come back and find a vehicle that has been shaded and as a result, it is at ambient temperature, which is often 100 degrees less. That means that you do not have to run so much air conditioning when you get into the car, the vegetables that you just bought will not wilt, and in general you will not be so uncomfortable when you get into your car. Running less air conditioning means that you burn less fuel which saves you money and creates less pollution. Shaded parking in general is just a very good idea. We all know this intuitively. We know it, for example, when we feel like second class citizens when we have to go to the top deck of a parking structure because there is no parking in the lower shaded decks. At Envision Solar, we solve for that situation, because we install our Solar Trees on the top decks of parking structures too. So shade is without a doubt an important piece of this.

A significant differentiator for our company, is that our Solar Trees® are very highly architected. They are not just structures that are banged together in hope that they will stay up for a few years. They are very highly architected and very highly engineered; we use nothing but the highest quality components when we put

them together. The benefit that comes from that is that we actually do something that is architecturally accretive to the built environment. We are taking a parking lot that is utterly useless real estate, other than for parking cars. It is typically fairly ugly and generally does not meet the architectural standards of the building that it is supporting. Buildings often have architectural aspects like marble or fountains or landscaping, but the parking lots rarely do. They are heat sinks, which mean they soak up a lot of radiant energy from the sun and then re-release it in a way that in-

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creases the building's air conditioning requirements and makes people uncomfortable. So instead of having solar hidden on the roof, we deploy solar that you can see, and do it in a way that actually improves the architectural look of the parking lots and takes architecture to the curb rather than have it start in the foyer. People benefit from the fact that we have actually improved the built environment for them in much the same way that real trees or landscaping or fountains do - except that our trees generate clean, renewable energy and actually pay for themselves which cannot be said of their biological counterparts.

We have also developed our column

integrated Clean Charge™ solution. That is the integration of electric vehicle charging stations, which we put into our Solar Trees. As we see growth in the adoption of electric vehicles, which we think is going to be significant this time, people will be able to come to work for example, park under a Solar Tree and plug in. That Solar Tree will recharge their electric vehicle with clean renewable energy, making it 100% emissions free as opposed to just tail pipe emissions free, which is what electric vehicles, using carbon fuel generated electricity are. This is because they are only as clean as the electricity that charged their batteries and if that is being generated in a coal burning plant, then that is not very clean. At the end of the day you are very hard pressed to find anybody that is going to tell you that this not is an excellent idea, because we are improving real estate, making it safer and more comfortable, making it look better, generating renewable energy and helping reduce American's energy costs and increase energy independence. Our Solar trees are buy America qualified; designed and made in America. This is one of those rare occasions in life where you just cannot find anything wrong with the deal - everyone benefits.

**CEOCFO:** Who are your customers, and where are the Envision Solar Trees installed today?

**Mr. Wheatley:** Broadly speaking our customer is anybody that has a piece of quality real estate or quality campus environment. That is, anywhere where people go and park their vehicles. You are not going to find us typically in an industrial environment. We are probably not going to build too many of these things outside of factories. You will see our Solar Trees in commercial real estate, corporate campuses, healthcare, hospitality, education, retail, and we have a major government customer and a major utility for whom we are building right now. That is actually an interesting

paradigm shift within the industry as we are now seeing utilities really getting onboard with this idea of distributed generation, rather than centralized generation, which has been their typical model for the last 100 years. They are now looking at and becoming used to and supporting the growth of distributed generation and of course, we are the ultimate distributed generation company, because we make electricity right where it is used. Instead of a customer buying electricity for their office from 500 miles away at a big central plant, we are producing that energy for them right there in their parking lot. There are many advantages that go along with that. First, we have much less reliance on transmission and distribution infrastructure, which means that we do not need to build big long transmission lines across the countryside, with all the environmental and entitlement impact that comes from that. Not to mention the tens or sometimes hundreds of millions of dollars it costs. At the end of the day, our customer is anyone who has a quality piece of real estate which is architecturally improved; they care about their visitors, are concerned about the environment and want to demonstrate that and finally they have the vision to realize that a quality solar deployment will cost less and produce more in the long run.

We signed a contract in November last year with General Motors to deploy our Solar Trees across their dealership network. This is perhaps not because the dealership network is necessarily very concerned about their electric bill. It is more to do with the fact that they will be selling the Chevrolet Volt, which is their fantastic new electric vehicle. They quite sensibly feel that they can probably sell more Volts if they are cool and parked underneath and plugged into a Solar Tree with electric vehicle charging stations. They are a quality customer, dealerships care about aesthetics, so they cannot just put up any old solar infrastructure. They need to do something that is well architected, well engineered and will actually improve the way the dealership looks; not make it look worse. Similarly, we have deployed in retail environments. The

retail customer is trying to attract customers. They want their customers to spend a lot of time in their retail environment, whether it is a shopping mall or box store. They know that unshaded parking is not attractive to people and they also know that increasingly Americans care about their environment and producing clean renewable energy.

What we like to say is that rather than just generating solar energy, our focus is on helping our customers do what they do better. We help Chevrolet sell more Volts, we help the retail environment attract and retain clients for longer. We make commercial real estate office buildings more attractive to tenants because shaded parking is important particularly when it is creating renewable and sustainable clean energy. Shaded parking makes the building more attractive to a tenant and that means that commercial real estate owner can probably shorten their lease-up times and increase their tenant retention. That is what they care about particularly in today's environment. In each of the examples I have given, while solar has been an important piece of the mix, it is the icing on the cake and there is an awful lot of cake. We really pride ourselves on understanding our customers business and seeing how we can help them through improving their built environment. In building our solar shaded parking structures, we actually help them do what they do better and be viewed as contributing to the community in which they operate.

**CEOCFO:** What is the cost; when do they see a return on their investment and how do you show them in dollars and cents that it makes sense?

**Mr. Wheatley:** In the future, if you ask a commercial real estate owner what the return on investment is on one of our Solar Trees, if he is sophisticated he is going to say, "Infinite". This is because it will become increasingly difficult to create a development without introducing sustainability and our Solar Trees do that in a way which benefits the campus in more ways than any other form of renewable generation. Take the way they look at landscaping for example. What is the ROI analysis on a tree or

a bush, on a fountain or marble, or any of these other things? They do not do ROI analysis on these improvements, they do them because they know they have to, in order to make the project work. Increasingly where you are talking about sustainability, or LEED certification and those sorts of initiatives, we are moving beyond the sort of discussion of how much electricity does this product generate or how much is it going to cost me. We are moving more towards, this is something we are going to have to do and it is a good idea to do it. A classic example is one of our current customers who is a developer, has told us that they will get through the entitlement process several months faster if they cover the parking lot with Solar Trees. That developer is now looking at an instance where they will get to revenue their development several months earlier because they are going to include Solar Trees in their planning submissions. To them the ROI analysis is driven by generating revenue and profit several months earlier while reducing the cost of entitlement. That's far more important than saving a few cents per kilowatt hour on their electric bill.

We do a lot of market segmentation and we make sure we are talking to the right individuals within the right organizations. That is owners, developers, C level people. They quickly understand that with this sort of ROI analysis, you have to view the entire value proposition. Having said that, there will be those people that we talk to who just want to sit down and say, "Well all I want to talk about is electricity production". So the answer to that question is in certain states for example New Jersey, where there are very generous solar renewable energy credits, we can deploy our Solar Trees and through financing mechanisms, have their ROI be immediate. That is to say that the payment that the end user makes is less each month to have the Solar Trees than the reduction in cost of energy from the utility. So in a state like New Jersey, the ROI is immediate and our Solar Trees are generating cash for them from the first month that it is deployed. On the other end of spec-

trum there are states in this great country where electricity is very cheap and there are no incentives. People are even sometimes quite hostile to Renewables in those environments, so you would not find us spending a lot of time trying to sell there. In those environments it could take thirty or forty years to recoup the cost if you are only looking at the energy savings. This is assuming, by the way, that we stick with a 3% year-over-year increased cost electricity, which has been the average in the United States for the last ten years. If you are going to go after that kind of long life ROI, you better build something that is going to perform flawlessly for that length of time and that's what we do.

Our strategy is to build a very high quality product. We are a little bit more expensive than many of our competitors and when I say that I mean from the installed cost point of view, but that is because we are aiming for the lowest total cost of ownership. We can make slight increases in installed cost translate to big reductions in cost over the life of the product. We believe that many of the structures being deployed to support solar out in the field today, will not last more than twelve to fifteen years in the field. The solar modules themselves may have a warranty for thirty years, but the structure that they are sitting on is not going to last for fifteen years. So you clearly do not have a thirty-year deployment. We build Solar Trees to last for life. We have had them looked at by independent engineers and they have told us that we should expect a fifty-year lifespan from them. If certain minor components fail they can be replaced, plug and play, but the structure itself if going to be out there and operating flawlessly for life. Our internal mandate is that it should not only operate flawlessly in thirty to fifty years, but it should look as good then as it does the day, it is deployed. Therefore, we are very careful about using materials that will not corrode or become dilapidated, because at the end of the day we do not want to become dilutive to our customer's architectural efforts. We want to continue to be accretive for many years to come.

**CEOCFO:** Envision has a large target customer base; how do you reach people and how do you decide which door to knock on?

**Mr. Wheatley:** Market segmentation is important to us. We are a lean organization. We do not have a massive sales force who can afford to just go out and shotgun blast the environment and hope that we pick up something as a result. Therefore, we look for customers that qualify in the sense that they have a quality built environment. That could be a corporate campus, a piece of, commercial real estate, or an educational environment or any other quality environment where people gather. Within those guidelines we are looking for customers that clearly have a demonstrated commitment to the environment, its sustainability and that have a constituency that cares about the same things. The kind of companies whose customers are that generation of people who are caring more about the environment and thinking about what kind of world their children are going to grow up in. Companies that serve that customer become our customer, because we can so visibly and in such a high quality way, help them demonstrate that environmental commitment to their customers. At the end of the day, it goes back to what I said about helping people do what they do better. It is a very broad market, 800 million parking spaces in the United States, and we think about 150 million of them are controlled by those types of customers. After that it is a question of asking where do we have relationships, and who on our team has the expertise in any given marketplace. If we have somebody who really understands the automobile industry and the dealership infrastructure, which we do, then not surprisingly, we were talking to General Motors and successfully talking to them. In fact, in a speech about sustainability made by one of GM's vice chairmen; the only partner company he named was Envision Solar. Some of it is essentially looking at broader market trends and the types of customers we should be targeting. Some of it is a pragmatic approach, which is based on our finite internal resources and relationships and to some extent geographic reach too.

We are very comfortable operating across the United States, though we are based in the Southwest. Actually, most of the activity that we have had so far this year has been in the Northeast so we have demonstrated that we can profitably execute in and deploy our products anywhere in the country. It is also true to say that we will have, in the future, international sales of our products, but for the moment, the U.S. is our focus because it is the largest market in the world though it is only the third largest solar market in the world and the second fastest growing solar market in the world. In many ways, we view the U.S. as kind of a sleeping giant that is just awakening so there is a massive opportunity here. We have somewhat finite resources so for us, market segmentation means trying to identify people who are most likely to benefit from our products and then asking ourselves, "Ok, within our team, where do we have the existing relationships or some other means of getting to the right person". Because as I said earlier, we like selling to "C" level people, owners and developers. Sometimes, if we are dealing with people who are less senior in the organization, it will be hard for us to explain value proposition beyond doing cheap electricity. If we are trying to compete based on cheap electricity, there is always somebody out there who will do it cheaper than us, and cheap is not what we are selling. We're selling quality which means we need someone in the organization who recognizes the value of quality and creating more value, generating revenue, rather than saving money, because while saving money is important, making and keeping more is better.

**CEOCFO:** What is the financial picture for Envision Solar International today?

**Mr. Wheatley:** We are very proud that we just released the first profitable quarter in the company's history. This is a company that has been through a lot of research and development, and spent years developing the finest product in the market. You do not get to the finest product in a space like this without spending a lot of time and energy doing it. The com-

pany has also developed many other products which are all very interesting and fantastic. We have elected to side line them for the moment, all but the Park Solar products, and that simply goes back to what I mentioned about our available resources, and needing to commit them to this huge opportunity. Nonetheless, I am very happy to have just released a profitable quarter and, most importantly, profitability at the gross margin line. That has been of absolute tantamount strategic importance to us. Demonstrating that we can actually go out in the field, sell our products, deploy them and do so profitably at the gross margin. I think everybody recognizes that the opportunity is huge. The only question thereafter is whether or not we can scale to take advantage of it. Our business model is essentially one whereby we own a lot of intellectual property and we have a lot of intellectual power within our office walls. The actual deployment of our products requires a lot of readily available skills sets out in the field and we are training people all over the country very inexpensively, because they already have 99% of the skill sets that are required, concrete, steel work and electrical contracting. In fact, all of the skill sets that are so desperately in need of work at the moment because of the current economic environment. We have a readily available pool of subcontractors across the country who can deploy our products. So profitability at the gross margin was a very important milestone for us. It shows that we have our costing analysis correct. It shows that we have picked the right price to sell our products and above all it shows that we can execute a somewhat complex deployment anywhere in the country and still do so profitably. We are raising money at the moment. This has

been significantly affected by volatility in the broader markets, nonetheless we are very well received and doing what we need to to grow the business. It is more challenging than it would be otherwise given the value of our story and proposition. Because we are generating gross margins, our fundraising activities are largely to address the significant growth we are seeing at the moment, not keep the lights on. At this point the challenge for us is to make sure we can manage that growth even within an environment where raising capital is more challenging than it has been in the last couple of years given the economic environment. I'm happy to say we are succeeding here but it certainly is not without its challenges.

**CEO CFO:** In closing, why should potential investors be interested, and what might people miss that they should know about Envision Solar International?

**Mr. Wheatley:** It is about quality. The broad question that people I hope are asking is, is it realistic to expect that mainstream commercial real estate or mainstream corporate campuses are going to ignore sustainable renewable energy? We think it is unrealistic to expect that. We think that it does not matter who you are; sometime in the next decade or so you are going to really bite off on Renewables and Sustainability and lots of people are biting off on it right now. If you accept that to be true, then you have to ask yourself how are those prospects going to get it done. There are lots of renewable energy solutions out there, such as wind, waste to energy, wave and even tide, but at the end of the day solar is still by far the most obvious choice. Solar is the most predictable, the most practical, the easiest to deploy, the cleanest and the most

maintenance-free. If you have accepted that everyone is going to do it and they are going to do it with solar, then you have to say, how are they going to do that? Traditionally it has been rooftop or adjacent property. We think rooftops are not a good idea because if you are running a good business you do not want somebody crawling around on your roof with all the risks and liabilities that entails. In addition, if you have an adjacent piece of property, it is unrealistic to expect that you might not have a better use for that piece of property in the next thirty years. Therefore, I want an investor to ask, is there a lot of opportunity here, and do I think that when the average piece of commercial real estate or campus environment does embrace Renewables, will they take advantage of solar covered parking? We think the answer is yes to all of those questions. After that the only thing you have to ask yourself is does Envision Solar have the right product? Well we strongly believe that we have by far the best product in the business, and I have yet to find anyone who has disagreed with me on that; even our competitors grudgingly agree. Do we have a management team that can execute? These are the questions I ask myself as an investor. If you look at our history the team that I brought in is made up of people who have worked together formerly at publically traded companies and have also worked in growth environments, new technologies and internationally. We have histories of growing small organizations into big ones so I guess I am going to say I want the investor to put a tic in all those boxes and, at least for me, I would say that probably makes a pretty good investment choice.



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