

Bringing to market Two Game Changing Products: their Smart Adaptive Sentinel Battery Management System and their Nickel Iron Atlas battery, Encell Technology is Reducing the Carbon Footprint, while Increasing Safety and Lowering Cost for Customers

**Clean Technology
Energy Storage**

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**Mohan R. Krishnan
CEO**

BIO:

With over 30 years of experience leading a wide range of global technology-based companies and organizations, Mr. Krishnan joined Encell in February of 2013 as its President and Chief Executive Officer. Mr. Krishnan's professional experience spans a broad range of industries including rechargeable batteries, automotive parts and systems, advanced aircraft engines and systems, and highly classified weapons and weapon delivery systems. Prior to joining Encell, Mr. Krishnan served for two years as

COO and CEO, Global Business Development of The JPM Group, based in Delhi, India, leading a team of executives responsible for 13 independent companies and 20 manufacturing plants, and was on the Board of Directors. Prior to leading JPM, he served as an Investment Portfolio Manager and Proprietary Trader for Deutsche Bank AG from 1999 to 2010. From 1997 to 1999, Mr. Krishnan ran the Rolls Royce, NA Industrial/Marine Business Division (former Allison Engine Company). Mr. Krishnan started his career at General Motors Corporation in 1981, serving in many engineering and engineering leadership roles, including Program Director for the Joint Strike Fighter Program.

Mr. Krishnan has an M.S. in Aeronautics and Astronautics from the Massachusetts Institute of Technology and a B.S. in Mechanical Engineering from the Indian Institute of Technology.

About Encell Technology:

At Encell Technology, we have a vision. We see an energy future that is far less reliant on the old ways of generating energy and increasingly committed to using alternative sources such as wind, solar, and wave. We see a future where this energy can be provided at a cost that is as low or lower than current fossil fuel or nuclear sources, and with far less impact on our environment.

**Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine**

CEOCFO: Mr. Krishnan, you became CEO earlier this year. What attracted you to Encell Technology?

Mr. Krishnan: I first came on as an adjunct consultant in the November time frame when asked me to come in and conduct a risk review on one of the products. We currently have two products- a battery management system called the Sentinel and an advanced nickel-iron battery called the Atlas. They wanted me to do a consulting review on the Sentinel out of our operations in Boston. I spent a day there, after which they asked me to come in and attend a board meeting and to look at the battery operations in Florida. After my involvement in about two or three different meetings, they asked me if I would consider being involved on a full time basis. By that time, I had gotten familiar with the product, the people, and the prospects looked very promising. It was an easy decision from there on.

CEOCFO: What has Encell developed?

Mr. Krishnan: Encell has developed two game changing products. One is a smart adaptive battery management system and what it does as opposed to the other monitoring solutions is that it completely takes over the management of the battery early on. It actually takes batteries that are currently on float, enhances their life, reduces maintenance costs, and reduces the amount of energy that is required to keep the batteries at full power and energy. It provides a very valuable value proposition to the customer while also reducing carbon footprint and increasing safety. Some of these batteries that are installed do

have a tendency to 'die' prematurely or experience thermal runaway. It does not happen very often, but when it does, the consequences are catastrophic and we can completely eliminate that. As a combination of all these factors, we provide a tremendous value to the customer. We also have a nickel iron battery that is an advanced battery based upon an old chemistry. We have taken the billions of dollars that have been invested in all of these modern battery chemistries such as lithium ion, nickel-cadmium and nickel-metal hydride and incorporated the best of the advances into the nickel iron chemistry. We have come up with a very advanced battery that has performance characteristics and costs that give us a tremendous advantage over any other incumbent or emerging battery systems. Those are the two products that we have at Encell.

CEO CFO: Would you go one layer deeper on what we have figured out to get both of these different products to work in a way not done in the past?

Mr. Krishnan: If you take the battery management system, most of the industry currently as we know it takes a battery and it is like taking a patient and telling the family and patient that they have cancer and we can inform you of this so you can take corrective action to cure it. What we do with the battery management system is that, being a smart adaptive system, we take the patient and prevent cancer from happening by treating him and giving him good physical exercise and good eating habits. We do tend to know that even under the best of circumstances humans come to an end of life situation. We are able to then tell operators that own the batteries that it is beginning to deteriorate and they need to take some corrective action to either replace or be aware so that you can prepare for the end of that battery life. We tell them on a preemptive basis. The biggest value here is the fact that when you have a wireless tower and the power goes

down, they do not want to be surprised with batteries that are not up to snuff and do not provide the backup energy that they need in order to not disrupt their service. That is the biggest risk of that system. We prevent that from happening and it is a huge advantage for the wireless carriers. For the battery, the current products out in the field are typically lead acid and are good products, and there is a 30 billion dollar installed base out there. Lead acid batteries currently have low relative life and they do not do very well under the required operating conditions that they are subject to, thus creating deficiencies. We have taken each and every one of those deficiencies and have been able to come up with a better solution.

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For instance, we can stay on float or we can tolerate high temperatures very well. We can do deep cycle multiple times compared to what any incumbents can do and we can also provide reliable power because we have no identified failure mechanisms in our battery whereas all of the other solutions have one to three failure mechanisms that they have to manage. Due to this, we have an extremely long lasting and robust battery.

CEO CFO: Are you still in the development phase or are the systems in use today?

Mr. Krishnan: Both of our systems have gone through extensive internal and third party testing that has been funded by major Tier 1 OEMs. We are currently in production on our

generation one products- both the Sentinel and the battery. We are actually shipping products out to customers as we speak. We have gone past the initial prototype, completed development testing and design reviews, and we have committed both products to production. We have actually commercialized both the battery management and the battery products. The Sentinel and the Atlas are now currently in production.

CEO CFO: It sounds as if your potential customers understand what you have developed and it is not a hard sell. However, is there some skepticism there?

Mr. Krishnan: As with all new products that are supposed to be better than sliced bread, there is obviously an education process that we all need to go through. So, the answer is yes, there is some skepticism and it is not just total blind acceptance. There are a couple of challenges. One is that there are 50+ years of incumbency and with most of these customers, there is a particular way that they have done business. We are trying to be a game changer and change the way they do that, so there has certainly been some education and interaction with the customers to get

them to come over to the “right side”. On the battery side, because we have extraordinary life, robustness and capability compared to the incumbents, our price is a little higher. However, when you start looking from a standpoint of effective price and price of the life of the product, we are a fraction of what our incumbents are. We still have to get people to recognize this and get them educated and the way we have done that is that we have gone on a very aggressive stand to conduct internal and third party testing. This has given us data from neutral and nationally renowned labs such as Sandia National Labs. These tests have produced data that stand up and strongly reaffirm some of the claims that we are guaranteeing in our products.

CEO CFO: You just announced funding. What is the plan for the dollars and how far will they take you?

Mr. Krishnan: We are actually looking at raising the next series D and that will take us through the end of June 2014 and the first quarter of 2015. That funding will make us a cash flow positive, self-standing company. This is the last raise we are looking at and it is going to get us to being a fully viable, independent company where we are actually making money on these products.

CEO CFO: Are people interested and is it easy to get attention from the investment community?

Mr. Krishnan: The investment community and venture capital area, especially in the Clean Tech arena, are a little fatigued. I think that they were all enthusiastic in the 2006, 2007 and 2008 timeframes but in 2008, the economic downturn has caused a little bit of a chink in the armor. It is not completely void of interest though because we have four or five parties that are very interested and are in late-stage discussions with us. Obviously, the discussions are not to be taken for granted as they used to be, but they are not completely at a standstill either. If you have a great product and a good story, there are still people that are willing to make investments in your idea and vision.

CEO CFO: What is your timetable for the next six months to a year?

Mr. Krishnan: We are going to try to close our series D in the next month or two. What we will do in the next six months is pilot a small-scale production plant where we make our Atlas battery products. On the Sentinel, we have a contract manufacturer. We do not have much capital or any capital invested but we just go to the contract manufacturer as the battery management system is an electronic product. We hold the IP, patents,

software, and get it manufactured by a contract manufacturer. Over the next six months, we will increase our customer base. We only have about 80 to 90 units currently installed and we are looking at finalizing either 5 or 6, and possibly upwards of ten tier 1, 2, and 3 OEMs that are interested and are going to deploy some of our units. There are probably one or two customers looking at system wide deployments in late 2013 and 2014 based upon the fact that we already have 15 to 20 units in their network. That is the Sentinel battery management system. On the battery side, the Atlas, we have a lead customer that deploys microgrids, which is one of the markets that we are in. They have given us a letter of intent for a good-sized number of batteries over the next two or three years. We are actually in production supplying batteries to that particular customer. We will be spending the dollars from this raise to come up with an alternate offering for forklifts, which is a very attractive market for this particular product. We will be completing a design and a demonstrator shortly and try to penetrate this space. We will also be investing in trying to come up with a next generation product for both of these and have those ready to roll out in the next twelve to eighteen months.

CEO CFO: You have considerable history in the industry. What have you learned in past ventures that will be helpful for you as you roll out a variety of products?

Mr. Krishnan: I am actually new to the battery industry. My background is essentially in aerospace and aeronautics. I was working in aircraft engines and that is what my degree from MIT was as well. I spent most of my early years working and managing aircraft engine operations, then I spent the last twelve to thirteen years working a hedge fund for Deutsche Bank. Most of my background is in

the high tech aerospace in the operations arena. When I came here, the thing that I learned is that batteries tend to have a particular way of operating. What I have been able to do is to bring the discipline that is required and new ways of thinking about how we can penetrate markets and how we can accelerate the introduction of products into the market. Those are the kinds of nuances that I have been able to bring on to the current company and current set up. Of course, none of this is relevant without the outstanding employees we have at Encell.

CEO CFO: Why should people in the business and investment community pay attention to Encell Technology?

Mr. Krishnan: We have a game changing product that is hopefully going to change the landscape of energy storage and we are going to be the only company that is green which does not require ongoing government subsidies to make money for the customer. The growth and the business potential for this particular company is quite spectacular and more importantly, our current strategy is to have a manufacturing operations scale in the United States to bring good jobs to the local community. We are on a hiring binge and we now have about 50 employees. When I first joined, we had 18 but we have upped that number close to 50 and we are expecting to increase that to about 170 to 200 people employed in the United States making batteries over the next two years. I think that our growth trajectory is pretty attractive and we are a company that is going to be producing well paying jobs and hopefully good security as we do our little bit to get the economy and our manufacturing sector strengthened in this country.



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