

With every Light Fixture in Homes and Businesses set to be changed Over to LED within the next five to ten years, Firefly LED Lighting is well positioned for Growth with their highly Cost Effective and Energy Efficient family of Patented Products



**Industrial
LED Lighting**



**Steve Barcik Amstel
CEO**

BIO:

Steve Barcik Amstel, CEO and Founder, is an entrepreneur and engineer with over 30 years experience in high-technology companies and engineering. Steve has started six companies and successfully exited

two of those companies, with three still in existence today. His experience in facilities and energy conservation with Texas Instruments, combined with a design background in capital equipment and consumer products, led Steve to found Firefly LED Lighting, Inc. Firefly is a Texas-based and Texas-manufactured LED lighting company. With Firefly LED Lighting, Steve and other team members provide energy-saving lighting products. The Firefly lighting line includes replacement bulbs, fixtures and solutions. Steve has won prestigious awards for positive action for the environment, including the World Wildlife Fund Award for Environmental Excellence and the Governor's Award for Environmental Stewardship. Steve received his Bachelor of Science in Mechanical Engineering from Virginia Military Institute in Lexington, Virginia, and is president of the Central Texas alumni chapter. Steve was chairman of the Semiconductor Equipment and Materials International Environmental Health and Safety Committee for ten years, as part of worldwide technology standards for environment, safety and health. Steve and his wife, Brandy Rainey Amstel, reside in Austin, Texas, where they both enjoy pugs, live music, filmmaking, and boating.

About Firefly LED Lighting

Firefly LED Lighting is one of the innovators in the sustainable light energy industry. Founded by Steve Barcik in Austin, Texas, the company geared to make Smart LED lights consumer-friendly by designing and creating LED lights for commercial and residential applications such as in the kitchen, lamps and cabinets. It is

also proven to be highly cost-effective when used commercially in restaurants, hotels and other business structures. The patented technologies behind each bulb create a product with a brighter output and better energy efficiency. Firefly has developed 28 Patent applications and continues to be a revenue generating company. It is the company's goal to continually discover innovative ways for consumers to save energy and money, lessen carbon footprint and uplift the quality of every LED light bulb.

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

CEOCFO: Mr. Barcik, what is the vision and focus of the company?

Mr. Barcik: The vision and focus for Firefly LED is to create great lighting to reduce cost and energy usage across our customer base.

CEOCFO: How do you achieve that goal?

Mr. Barcik: We have invented and designed a number of lamps which are light bulbs (in our industry, we call them lamps) and LED lighting products. We have taken an innovative approach and looked at what was holding back LED adoption. The problems that CFLs, compact fluorescents and LEDs were having in the market and took a look from an engineering standpoint what those problems were and how they could be resolved. We came up with a broad patent portfolio and a great deal of intellectual property to bring to bear on these different issues in lighting.

CEOCFO: Would you give us an example or two of where you saw a need and what you are able to do?

Mr. Barcik: We saw that lighting in hospitality which is hotels and restaurants and in large commercial spaces even today is incandescent lighting, your normal spotlight type bulb lighting. That lighting is very inefficient and extremely specific in the pattern of light it puts out, the intensity of light and the quality of light. It is in your mid to high-end retail spaces as well and even art museums and other places. The control of the lighting really sets the mood for the place you are going to be to the point of if it is a beautiful lighting design you will notice it. If it is a terrible design you will be uncomfortable and unhappy, unless you really study lighting you probably will not notice it. We went and looked at the products that are in used in those mid to high-end spaces and then brought our technology to bear along with the LED technology from our suppliers to create a light bulb that would replace what is in those spaces and reduce their cost of ownership for that lighting by upwards of 93%. We came up with lighting that as closely as possible and in some cases exceeds what was already in place to give the same kind of quality and look and feel, while dramatically reducing cost.

CEOCFO: What is the key that others have not figured out?

Mr. Barcik: There are three main enabling technologies, which we developed. One is our thermal design, which allows us to get more heat out of the LED and out of the power supply in the lamp, than any other product on the market. Many people think LEDs do not make any heat. LEDs make about eight to twelve percent of the heat that an incandescent will, they make very little heat, but an LED light bulb is more like your laptop computer in some ways than it is like a light bulb. It is an electronic appliance built out of electronics. We have to keep that cool. By developing a very robust and unique thermal design, and thermal pathways, we are able to get more heat out of the bulb, so that allows us to build a brighter

light bulb and brighter meaning equivalent to 100 or 125 watt if you needed that or directly equivalent to a 70 or a 40 watt light bulb. The other things that we have developed are a driver power supply. Across the industry, there are many drivers and power supplies out there but most of them are about 40% to 60% efficient, ours are in the high eighties and or high nineties in efficiency. There are a couple of other parameters about the power supplies that are critical, but it comes down to longevity. We built a very long lasting power supply at a reasonable cost of goods. You combine those things together with the third thing which is the product is modular, meaning you can adjust the beam angle which means how much light spreads out from the lamp. You can go from 120 degree, which is basically a floodlight, it is just flooding

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the space with light, in five steps all the way down to a twelve degree beam angle, simply by changing a lens. Instead of having to buy a large number of different stocking units, a museum or hotel or retail can buy one or two stocking units from Firefly and change beam angles as they are installing it, or adjust the beam angles based on a lighting design. They can get exactly the same look, maybe even more light control over what they had before. Those three things allow us to have a product on the market that is at a value price point. We are not the \$12 light bulb you are going to find in a big box store on the bottom shelf. We are a light bulb for these lighting designs that really need great light, control and very long-lasting product. One of the neat things that we have had with our first product and this was one of the primary design goals, was extremely reliability without adding cost. Across all the installations we have done so far, we

have only received one light bulb back that was actually failed. That is astonishing in an electronics product market, to have that low a failure rate. That low a failure rate can have somebody be comfortable if they come in and spend a few thousand dollars installing the lights, they are not worried they will have to come back a month later and replace them.

CEOCFO: Do you only provide your light bulbs to the customers you work with? What is your business activity?

Mr. Barcik: We are going to market through typical and non-typical lighting channels. We are selling through lighting reps, lighting distributors, and electrical distributors. We have a large number of those onboard across the nation. Aside from that, there are other niches where lighting is now becoming very important such as with high-end home remodeling. We are even seeing accelerated LED adoption in the past four months with LED lighting going from the early adopter space where engineers and technical people and people who love technology, buy all these gadgets. We are now seeing that move from the early adoption curve into the broad adoption curve. Even

small kitchen remodels, new home builds, almost any kind of commercial remodeling and any kind of commercial remodel, all have an LED designed in across the board for lighting.

CEOCFO: You mentioned some of the industries like hospitality that seem to be a bit behind the times as far as lighting. Are they beginning to have an interest on their own and how do promote the interest in your products and services?

Mr. Barcik: Hospitality really is not behind the times, there was just not anything that could replace what they were already using. If they are using 100 watt flood or spotlight, there really was not a CFL replacement for that. LED lends itself perfectly to that space, so they are actually pushing the uptake of this product, it makes a big difference for them.

CEO CFO: How do you attract attention to Firefly? Does your exposure translate into increased business?

Mr. Barcik: We had a number of great marketing and PR people on-board with us and we had the honor and privilege to be part of the Austin Technology Incubator. Those three things combined have given us a great deal of press and media. We were on the Jimmy Fallon show just this recently, ABC News came out and interviewed the team and I. It is just a combination of things. It is being in the right market at the right time. I attribute some of it to our branding. I think our brand Firefly is a very evocative brand. When you think about LED lighting and you think about Firefly, you are reminded of an image of a Firefly as being a natural, environmental meme that is in the world.

We are looking at expanding our product into an OEM product where we are providing our light engines and driver to appliance manufacturers and other manufacturers outside of the lighting space to increase our revenue and our reach.

The best part of leading this is working with our team. I have an amazing team here; it is a joy to get to work with them. When I am traveling and doing sales as well, I miss being with my team. The three biggest things are managing the overall operations, funding / investing, sales and joint ventures. That is the scope of my day and my week.

CEO CFO: With so much opportunity, how do you pick and choose what should be your focus?

Mr. Barcik: In more focused products, that is probably easier. Firefly LED Lighting can be used in so many

places from residential to convenience stores and most anywhere. What we need to look for is where people really get the value that we are creating, so we look for niches and markets where people get that value. We have a product that above the other products out there in performance and value. When those two things line up, we know that we have somewhere where we can go. A company competing in this market needs to focus and needs to look to those kinds of markets that get what we are doing. We use a common method for doing that, we will brainstorm a large number of niches and possibilities and then we will wind through it, and if it is a high value opportunity that we can vet out quickly, then we will go after it. We use the lean startup methodology to test different campaigns, niches, and markets as well. We will get into a space and test it and continue to see how we can get accepted and move through that process so we can rapidly decide which market we need to be. We can use that same methodology for testing marketing messages and rollouts and other plans. It is a very effective method and it lends itself well to people like me, who are engineers and scientists as well. It is easy to come up with a marketing idea and throw it out there, but unless you have an operational background that will allow you to understand whether it is actually generating traction and how quickly it can generate revenue, then it really is just throwing something out there as opposed to actually making a true experiment and figuring things out.

CEO CFO: Are you funded through the next steps of development?

Mr. Barcik: We are funded and we have completed the R&D for this for this phase of the company and devel-

oped all the products for this stage of the company. We are launching the builds of the second generation products now. The funding that we are raising now really is to ramp sales and marketing and to fund the inventory to support that. Our current R&D set and our current design set is completed with the funding that we already have.

CEO CFO: Why should people in the business and investment community pay attention to Firefly LED Lighting?

Mr. Barcik: People should look at Firefly today because of three big things. We have the intellectual property and designs, which are head-and-shoulders above the other products that are out there. Secondly, we have broad market adoption and we have identified the initial niches where we can sell our product. We are in the right space, we are in LED lighting at the initial inception of broad adoption. This being a \$40 billion potential market, leaves a ton of room open for innovative companies like us to step in and grow dramatically over the next three years. The growth rate in LED lighting is through the roof already, it has exceeded expectations by four and five times and we expect it to grow twelve to twenty times per year over the next three years. It is that wave of adoption that people really look for when they are looking to invest in something. Firefly LED Lighting is taking advantage of that market. Most every light fixture that you have in your business or home will be changed over to LED within the next five or ten years. Firefly is poised and already taking advantage of that opportunity.



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