

The Business Model Canvas

Team or Company Name:
LED Alternative Energy, inc.

Date:
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<p><i>Key Partners</i></p> <ul style="list-style-type: none"> • LED bulb suppliers – Philips, Luxul, CREE, etc. • PG&E • Quick Light Recycling 	<p><i>Key Activities</i></p> <ul style="list-style-type: none"> • Sales, sales, sales • Develop marketing materials • Installation team training • Complete pilot projects with increasing scale 	<p><i>Value Proposition</i></p> <ul style="list-style-type: none"> • Replace old lighting technology with energy efficient LED technology • Decreasing business expenses – energy (lighting and HVAC), Facilities O&M • Support energy efficiency/sustainability initiatives • Improving employee satisfaction – workplace lighting also impacts productivity 	<p><i>Customer Relationships</i></p> <ul style="list-style-type: none"> • Build relationship through direct sales • Continued customer service post-project completion • High-touch, high-value service 	<p><i>Customer Segments</i></p> <ul style="list-style-type: none"> • Commercial buildings <ul style="list-style-type: none"> ○ Schools ○ Grocery Stores ○ Parking Garages ○ Gyms ○ Prisons ○ Libraries ○ Retail
<p><i>Cost Structure</i></p> <ul style="list-style-type: none"> • COGS – LED bulbs • Sales and Marketing – key cost in customer acquisition • Installation teams – project managers, supervisors, and installers 		<p><i>Revenue Streams</i></p> <ul style="list-style-type: none"> • Total project cost upfront <ul style="list-style-type: none"> ○ Cash ○ Low-interest loans from PRG&E on-bill financing • Targeting 30% operating margins 		

Executive Summary

In today's world of rising energy costs and increased focus on sustainability, the realm of energy-saving technology has become increasingly pushed into the public sphere of attention. With this in mind, it is here at LED Alternative Energy (LEDA) that we seek to insert ourselves into the essence of this dilemma.

As the first movers into this market, our mission is simple: to facilitate quick and easy installation of LED lighting into commercial, industrial, and educational facilities. Philips predicts that there are over 2 billion linear fluorescent light bulbs in the U.S. alone. With a projected sale price of \$40-\$50 per LED unit, it is clear that we stand to enter a domestic market of \$80-\$100 billion. This enormous figure foreshadows what is yet to come if global expansion into international markets were to occur.

Our firm offers the coordination to retrofit almost any facility in Northern California with LED lighting within a day. An average electrical contractor may take up to a month to retrofit a facility due to their lack of ability to scale. Prior to the actual retrofit, our team of C-10 national account managers will provide a free energy audit and consulting service for any prospective client as to whether LED lighting would be feasible in the long-term scope. This expertise comes not only from our painstaking research in the field, but also from our firm's own formula for evaluation. Finally, LEDA is uniquely positioned in relation to other firms in its supply chain. Through a house account with Luxul (our supplier of linear tubes), our firm has received favorable pricing far below the market price, creating a strong competitive advantage. From that point on, our firm has vertically integrated the entire process of reception of the bulbs to installation, giving us efficient, and effective control of the supply chain. This ideal arrangement was only possible through the strong network arrangement between LEDA and our suppliers, contractors, and labor force.

What LEDA seeks to offer its clients is not a simple way of saving money or utility costs, but an opportunity to make a step towards a more viable future. We pride ourselves on not just focusing on the bottom line, but the bottom line of our environmental stewardship and enhancing their facilities lighting environment.

Business Overview

At LED Alternative Energy we believe LED technology is the future of lighting. We are a turn-key LED lighting solutions company. We provide lighting consultation, supplier selection, financing options, and post-project customer service. Currently, we are focused on replacing fluorescent tube bulbs with direct, LED retrofits.

Value proposition – financial

LED technology has finally come down the cost curve to be feasible for commercial customers to upgrade their existing fluorescent lighting. Coupled with rising energy costs and a focus on energy efficiency, LED lighting upgrade projects now have a payback period of less than three years. Furthermore, utility companies (like PG&E) are offering low (sometimes 0%) interest loans for energy efficiency projects.

Value proposition – environmental

LED's are significantly more energy efficient than traditional lighting technology. They are able to reduce our demand on electricity dramatically. By reducing commercial and industrial demand for electricity we are offsetting the need to produce electricity from fossil fuels and also delaying the need to build additional electric capacity. Furthermore, the fluorescent bulbs we are replacing contain toxic and hazardous materials (mercury) while the LED's are completely safe.

Vision

The future of lighting is LEDs. The market economic forces are now aligning to allow that transition but it will require a new, innovative services company to usher in the shift. We believe that the time is now to develop such an organization and help reduce our electricity demand.

Current status

We are currently in planning stage with several clients to do pilot projects. We have identified and are working with a supplier for the LED bulbs, but will strive to stay brand agnostic. We have an executive team of 10 co-founders and part-time employees. We have a three person board with legal, entrepreneurial, finance, and strategic expertise.

The Market Opportunity (the problem, the pain)

LED's have a current market cap at \$6.8 billion, however by the end of the decade that number will reach \$68 billion. According to the energy star, there are 4.8 million commercial buildings and 350,000 industrial facilities in the United States. The annual energy costs for US Commercial and Industrial complex's is \$202.3 billion (with a 30% inefficiency rating). If these firms went LED, savings would be estimated at \$20 billion or more per year. Return on investments for these firms to switch to LED's range from 8 months to 3 years. Compared to Solar, this is a fantastic first opportunity to sustainability and savings. In addition, for every MW of savings, there is a positive externality of 661.82 lbs of carbon saved from being emitted into the environment. The possibilities are endless, as by 2030, projections are that LED's will be the leader at lowering energy consumption and be the primary lighting source for the planet.

Market Solution

Product(s) or service(s)

We provide three levels of service:

- Consultation – we analyze a client's current lighting system to determine if they will be a good candidate to adopt LED technology
- Installation – we provide installation services that procure the LED bulbs, replace them onsite, and recycle the old toxic florescent bulbs
- Finance – we provide full-service assistance in securing low-interest funds from local utility, state, and federal government sources.

Competitive Advantage

Currently, most commercial and industrial building owners outsource their lighting needs to electrical contractors. These electrical contractors have no incentive to replace the current technology (they understand the old technology and they are respond slowly to technological change). Furthermore, they would suffer losses on O&M contracts if their clients transition to LEDs as LEDs last about 2.5x longer than florescent bulbs. Our company, on the other hand, is starting from the ground up to focus on the LED technology and build new business models to factor in the longevity and durability of the technology.

Our greatest competitive advantages will come from first mover advantage, expertise, and strong customer satisfaction.

The Market

We will be targeting commercial and industrial buildings with at least 1000 light bulbs. We need this scale to secure whole sale pricing. Furthermore, we are targeting buildings that keep the bulbs on for at least 18 hours a day.

Financial and Social Impact Summary

The financials for our firm aim for a 25% profit margin and 49% gross profit. Our return on investment for our clients range from as low as 8 months to a high of 3 years depending on factors associated to their building.

Social Impact:

Each LED type will have its own characteristic **watt output** which, when multiplied to the **amount of bulbs** for each type, will determine the **total watts per bulb** for that type. The **average watt per bulb** is the sum of the individual totals divided by the total amount of bulbs. The **average watt per bulb** is needed to find the **savings from switching** fluorescent tubes to LED tubes. This is the difference between the average fluorescent tube watts (i.e. average watt per bulb) and the LED retrofit. The **savings from switching** is used to find the **MWh saved over the lifetime** of the tubes. We need to figure out the **total lbs of CO₂** generated per year in the state in order to calculate **the CO₂ saved over the lifetime of the LED tubes**. We do this by using the **percent contribution** of each generation type and multiplying it to the lbs of **CO₂ emitted** for each. This results in the CO₂ emitted per MWh and the sum of these values gives the total lbs of CO₂ emitted per MWh in the state for a year. The statistics for the MWh generated for each type and the CO₂ emission rates are found on the EPA website and are available for public viewing. Since renewables do not emit any CO₂, their emissions rates are 0. Finally, take the sum of the CO₂ emitted per MWh for each generation type to get the lbs of CO₂ produced in total by all fuel energies.

Management Team

Indy Nelson (Co-Founder and CEO) is majoring in Business Administration and Environmental Economics and Policy at the University of California, Berkeley. He is an Eagle Scout that earned all 131 merit badges offered in a multitude of fields, served as an elected Section Chief representing 2,500 members, and responsible for his executive cabinet of 10. He has also served as a supervisor of a 32,000 square foot indoor aquatic facility. Indy is devoted to environmental sustainability and the reduction of carbon emissions.

Forrest Yeh (Co-Founder and CTO) is a second year undergraduate at the University of California in Merced studying Bioengineering and Cognitive Science. He currently works as a Resident Assistant on campus at the university and in two research labs, the Mechatronics, Embedded-Systems and Automation (MESA) Lab and Emergence of Communications Neuroscience Lab. Forrest is also a Medical Scribe for Alameda Inpatient Medical and Head Lifeguard at Piedmont Community Pool. In his free time, Forrest enjoys building and fighting Combat robots and he plans to continue to medical school after his undergrad.

Michael Distad (Co-Founder and CCO) is a Business Administration major at UC Berkeley Haas. He has over a decade of experience working with customers, and providing solutions to their unique problems. When he is not on road trips or working in the office, he can be found at the ocean, baseball field, or hockey rink

Alex Todorov (Co-Founder and Executive Advisor) is a 2014 MBA candidate at Berkeley Haas School of Business focusing on cleantech and entrepreneurship. Prior to business school, he worked at Deloitte Consulting as a technology consultant for the financial services industry. He has experience working on cleantech projects for Applied Materials, GE Energy Ventures, Sungevity, and Solair. He has a B.S. in Finance from the University of Maryland College Park.

Board of Directors

Jan Novak is a business leader and educator. Experienced classroom and online educator in a broad range of business courses. Deep functional strengths in business planning and strategy, consumer marketing, international market development, and finance.

LED Alternative Energy Go-To-Market Strategy

Phase 1: Pilot Projects

The first phase of our GTM is to complete 3 pilot projects. These projects will mostly be done at low margin, enough to cover our initial startup expenses. The purpose of these projects is to develop our sales and installation processes, build our installation team, and establish partnerships with key suppliers (labor, LED bulbs, etc.).

Pilot Project Targets

\$25,000-\$50,000 to qualify for PG&E on-bill financing.

- Parking Garage – underground; 200-400 bulbs; privately owned.
- Small retailer – 5,000 sq. ft.; 250-750 bulbs; single store, privately owned.
- Grocery Store – 10,000 sq. ft., 1000-2000 bulbs; single store, privately owned.

Phase 2: Key Customer Accounts

Acquiring key accounts with large lighting requirements (both in individual locations and across a large commercial building portfolio) will allow us to scale and achieve profitability quickly. Potential customers include grocery store chains, retail chains, and large corporations. Currently focusing on corporations with large facilities in northern California (Google, Apple, Genentech, etc.).

Sales Approach

Using empirical data from phase 1 pilots, attract a phase 2 customer to perform a proof of concept project in a subsection of their facilities. This could either be one building on a campus or one location for a retailer. After success of POC, roll out across entire campus or across entire region of stores.

Revenue and Margin Targets

\$300,000-\$600,000 in year 1, growing to \$5 million in year 3. We should be able to accomplish this with only a handful of key customers

Phase 3: Geographic Expansion

We plan to use profits generated from Phase 2 to begin our 3rd phase, geographic expansion. At this point, we are exploring several different options for this expansion:

Company-owned sales offices

For regional expansion, we plan to create a standardized launch process for company owned sales offices in other regions. We plan to target high value markets within the US such as Southern California and Hawaii, as well as other countries where we have network connections.