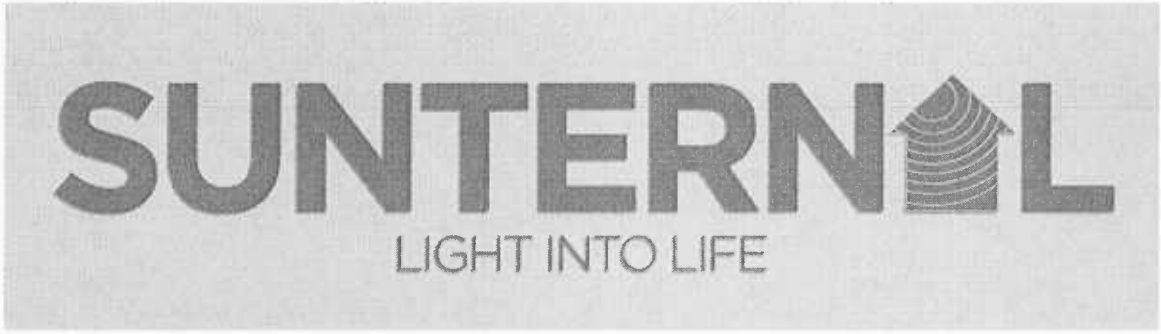

SUNTERNL
LIGHT INTO LIFE

Business Plan Authors

Brian Kinyanjui Davis, NYIT

NingNing Hu, NYIT

Inder Singh, NYIT

Ibrahim Khalid,NYIT

Lali Qureshi, NYIT

Professional Advisers

Professor Matthias Altwicker

Professsor Tobias Holler

Professor Joanne Scillitoe

About Us

Sunternal, L.L.C. is a solar housing design firm founded in New York in 2012. Sunternal is committed to harnessing the power of the sun ("light") into an eternal, sustainable source of energy to enhance our everyday living ("life").

Vision

Engage the world with solar power.

Mission

We are committed to offering our customers innovative green housing designs with the ultimate goal of providing energy sustainability.

Values

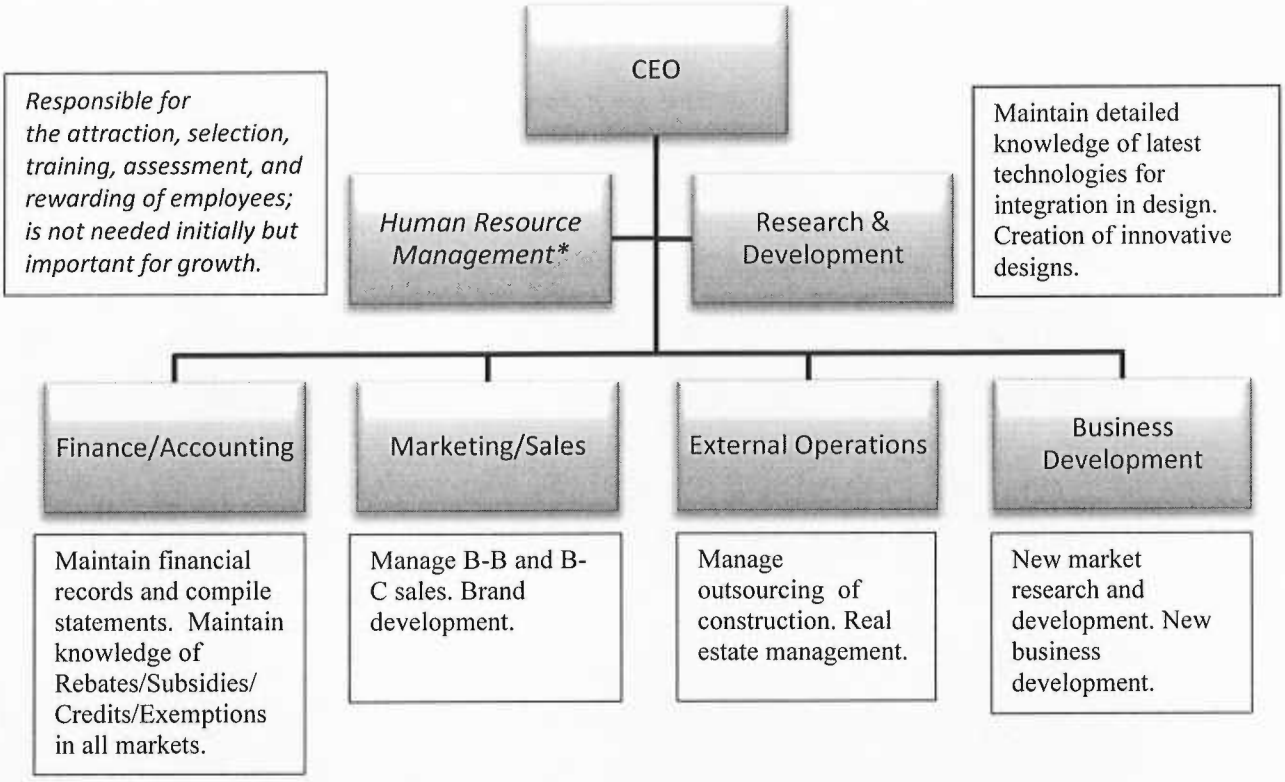
We stand by our consumer's choice to go green by offering the best sustainable and green housing designs. We do this by maintaining a bond between our stakeholders and our day by day devotion to enhance and integrate green energy into our lives.

- Design affordable, customer-ready solar houses.
- Exceed all municipal, state and, federal green energy subsidies requirements.
- Customized designs that exceed customers' expectations.

Organizational Structure

To meet the needs of the organization upon founding, we recommend a functional structure as diagrammed below. A functional structure will permit the effective utilization of functional expertise. For example, financial expertise will be needed to stay abreast of the ever complex rebates/subsidies/tax credits within NY and beyond as the firm expands its geographic markets, solid marketing/sales expertise to not only promote the *Attain This!* housing design and future designs but also build brand recognition in what is expected to become a crowded market of solar home designers and builders where branding will play a key role in competitiveness, and the recommendation to outsource construction requiring deep construction and contracting expertise to assure quality construction. This functional structure will also allow for growth to market additional solar housing designs beyond the *Attain This!* design into the future.

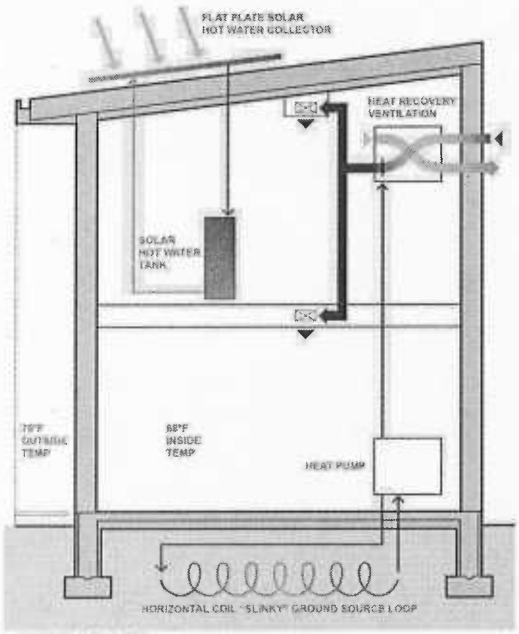
*(*Note: the human resources position will become critical in the future as Sunternal expands and needs to hire knowledge intensive workers, particularly for the R&D function of the organization. However, this position is not deemed as necessary at founding or the early stages of the firm where the founding team can provide sufficient expertise).*


CEO
Responsible for the attraction, selection, training, assessment, and rewarding of employees; is not needed initially but important for growth.
Human Resource Management*
Research & Development
Maintain detailed knowledge of latest technologies for integration in design. Creation of innovative designs.
Finance/Accounting
Marketing/Sales
External Operations
Business Development
Maintain financial records and compile statements. Maintain knowledge of Rebates/Subsidies/ Credits/Exemptions in all markets.
Manage B-B and B-C sales. Brand development.
Manage outsourcing of construction. Real estate management.
New market research and development. New business development.

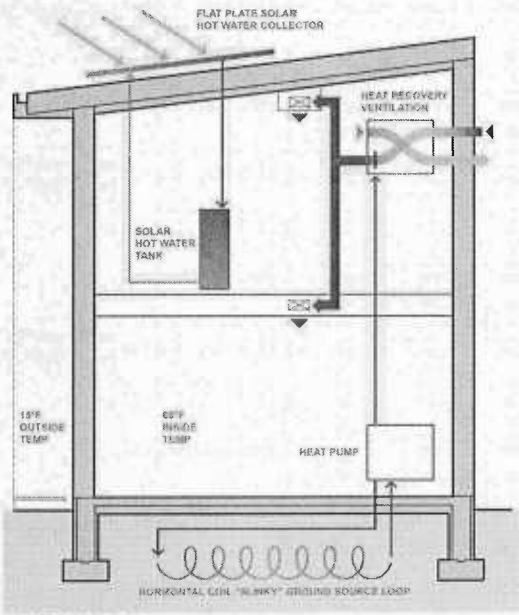
Product and Service Description

Sunternal provides a variety of services that meets and exceeds the needs of our clients. Sunternal offers a range of services to accompany solar technology projects ranging from research and design and energy efficiency testing to quality installation of our designs. We have a network of experienced and highly educated solar experts who can provide the latest advancements in design and solar technologies to enhance life.

Sample Design



ACTIVE COOLING



ACTIVE HEATING

Our signature design is the *Attain This!* solar home. *Attain This!* is a high-performance building prototype which provides an affordable, flexible and healthy environment for its occupants. The design stresses solar and thermal performance to provide its owners with a comfortable house that can sustain itself without water or gas bills and much reduced electricity bills. The exterior space is a dynamic, productive and regenerative entity. It provides enough room in the front yard to nature and harvest fresh produce while also allowing enough backyard space for a family to comfortably relax. Focusing on energy efficiency, the *Attain This!* design allows for stable temperatures all

year round using heating and cooling appliances that help meet energy reduction goals. The *Attain This!* design also allows for purification of rain water to potable water eliminating/reducing the water bill as well.

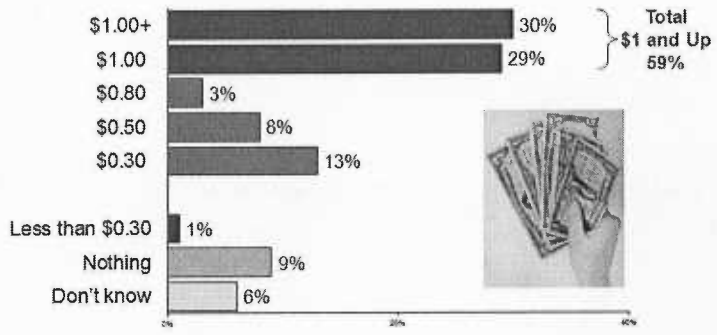
The External Environment

Before a recommendation of how to position *Sunternal* in the market to maximize profits is made, a clear understanding of the external environment context of *Sunternal* is necessary. The solar housing industry is a newly emerging industry, emerging from the convergence of the solar energy and construction industries. As a result, it is both an exciting and challenging time to launch a solar housing firm in this new industry.

Local, state and federal governments currently have a mostly positive influence on the growth and potential of the solar housing industry, particularly in the form of incentives for solar homeowners and buyers. The potential windfall from rebates and credits create significant incentives for individuals to purchase or retrofit their homes to solar energy. Within Long Island, the Long Island Power Authority (LIPA) rebates are currently $1.75 per watt with $17,500 cash back maximum. Also, LIPA is expected to increase its residential subsidy for solar PV systems from $3 to $6 per watt. Federal tax incentives include a 30% residential solar investment tax credit through December 31, 2016. Further, New York incentives include a 25% residential tax credit on net costs for solar electric systems with a maximum credit of $5,000. In addition, there is 15-year real estate property tax exemption for installed PV systems in NY.
(Source: http://www.egnret.ewg.apec.org/meetings/egnret38/[E8]%20USA.pdf)

An interesting insight into consumer's sales, though, is that New Yorkers willingly agree to pay more for solar energy per month, regardless of income. 82% of lower-income respondents interviewed (less than $30K/yr.) have indicated a willingness to pay more for solar energy. This is only slightly lower than the highest-income respondents ($100K/yr. or more), among whom 88% are willing to pay something more each month. Thus, people of all income levels are willing to pay more for solar power and can also receive these valuable rebates and credits if they own a solar home.

85% OF THE ELECTORATE IS WILLING TO PAY MORE PER MONTH TO SUPPORT GREATER USE OF SOLAR POWER IN NY



Income is not determinative of willingness to pay for more solar in New York. Fully 82% of lowest-income respondents interviewed (less than $30K/yr) indicate a willingness to pay something more. This is only slightly lower than the highest-income respondents ($100K/yr or more), among whom 88% are willing to pay something more each month.

(Source: http://energybychoice.com/blog/)

These factors create an interesting insight into the value proposition of solar housing sales. Although the various credits and rebates available to prospective and existing solar homeowners can lower the costs to use solar energy, very likely keeping energy costs within an affordable range for homeowners, the focus on credits and costs in the sales of solar homes is likely not the key factor for purchase.

Another opportunity for the solar housing industry is that the New York Energy Research and Development Authority (NYSERDA) offers a free home energy audit and a report for NY residents. This could become an opportunity for solar house design and construction firms that can receive home energy audits on their home designs with the legitimacy of a NYSERDA rating.

However, the economy, particularly in Long Island, remains a challenge. The slow growing economy can negatively impact the sales of solar homes well into the future. In addition, the housing costs in Long Island are above national averages with $230,000 as the average house price in the area and Long Islands electric rates are among the highest in the nation with an average of 7% annually increases. However, the average amount of income for a house in Long island is approximated $107,500 in Suffolk county and Nassau county, higher than the national average, which was around $51,413 but family wealth is not increasing. According to the Federal Reserve observations in June

2012, the American median family has no more wealth in 2010 than in the early 1990's. Thus, the cost of housing in Long Island will remain an important factor for solar home sellers seeking to compete in this market. As a result, studies have suggested that there is an exodus of younger adults from Long Island due to these housing costs.

(Source:http://usatoday30.usatoday.com/money/economy/story/2012-02-09/income-rising/53033322/1)

However, Long Island is also a very favorable location to harness the suns energy due to its coastal location and significant amount of sunshine. This creates an opportunity for solar homes to reduce exceptionally high electric rates in the area for residents.

(Source:http://www.nytimes.com/1999/12/12/realestate/in-the-region-long-island-median-house-prices-soar-to-record-levels.html?pagewanted=all&src=pm0)

(Source: http://www.builtwellsolar.com/onlongisland.html)

As far as social concern for solar energy, there is an increasing interest in alternative and renewable energy, including solar. This trend is further fueled by some celebrities, such as Ashton Kutcher, Johnny Depp, Bradd Pitt, and Angelina Jolie, who all currently own their own solar houses, mostly in California In general, green and renewable energy is becoming more and more mainstream as we speak. Thus, social interest in solar energy is an opportunity for solar housing sales and could be effectively encouraged by celebrity endorsements, whether direct or indirect, as is the current case in the California area.

(Source:http://www.keenforgreen.com/b/celebrity-solar-whos-putting-their-money-where-their-mouth-and-whos-not)

Solar technology is also continually improving every year. For example, solar panels have developed significantly in quality and cost in the past few years creating more affordable solar energy available to homeowners.

Beyond the broader environment, key factors in the emerging solar housing industry, extrapolated from the solar energy and construction industries, will provide insights into factors that will directly inhibit and enhance profitability within the industry.

As far as the power of buyers, in 2011, the US was the world's largest producer of electricity from geothermal, solar and wind power trailed by China in the total production

of renewable energy. In addition, the electricity retail market in the US is partly liberalized, with end-users in certain states and cities, such as NYC, able to choose their providers. This allows customers to opt for various renewably-generated electricity in regard to sources and suppliers in many cases. Some consumers may prefer to use electricity from renewable energy sources but this is by no means an indispensable commodity. In addition, there are minimal switching costs for consumers to switch providers and sources in an ever increasing commodity market. This suggests that buyers have moderate leading to higher power in the future as energy options continue to increase, particular as utility firms can offer renewable energy instead of homeowners buying solar homes to be "off the grid", although it is slowly becoming more popular for individual households to generate their own electricity using solar panels. Customers will have increasing options to determine who and from what form they purchase their energy from creating a competitive dynamic in regard to pricing and gaining/retaining customers. However, an opposing force in this dynamic is that the high number of buyers in this market, coupled with their small size as independent purchasers, diminishes the impact on market players of losing large volumes of consumer and weakens buyer power considerably. Thus, overall, based upon these dynamic forces, we believe **Buyer Power is Moderate.**

The power of suppliers refers to the suppliers of solar design firms such as the creators and manufacturers of technologies adopted and embedded into the solar housing, the real estate needed to build the house upon, outsourced construction labor and the technical labor market in this knowledge intensive sector. As solar energy technology continues to improve along the projected technology development S-curve, it is expected that the cost of these technologies will eventually diminish yet exhibit increasing performance. However, this technology development is still in process and, within solar housing, encompasses a complex array of technologies. For example, the cost of solar panels continues to decline as the technology becomes more mature and developed, allowing innovative efficiencies in manufacturing and production to drive prices down. One additional factor, however, that is related to the governments infusion of renewable energy research is the potential for new, innovative and disruptive technologies to be

developed that exceed the performance of existing technologies within the solar sector. These technologies will replace cheaper but lower performing technologies and be sold at a premium cost. Based upon these dynamics, we believe that **Supplier power will remain Moderate** into the future as technologies are developed, improved in performance and price yet are subject to disruption as the research and development of renewable energy technologies, including solar, continues. This dynamic suggests the need for a solid R&D group within *Sunternal*, likely inclusive of various disciplinary expertise, inclusive of architecture and engineering, within a solar housing firm to effectively understand, adopt and integrate current and disruptive technologies.

The threat of substitutes will continue to increase. These substitutes include other types of renewable energy sources including wind, biofuel, fuel cell, geothermal, and hydroelectric power. Hydroelectricity is currently the largest source of renewable power in the US. In addition, non-renewable energy sources remain entrenched in the energy sector as a current substitute with the US market currently dominated by coal, natural gas, and nuclear power. However, the current CO_2 emissions created by using fossil fuels is a high cost to the earth that will likely continue to encourage increasing customer switching to renewable energy. One dynamic of these substitutes, though, including solar energy is that utility companies are increasingly using renewable energy as a source of their energy product. For example, LIPA is sourcing solar energy for their own electricity product. Thus, consumers will not need to buy a home equipped with renewable energy in order to use renewable energy sources now and into the future, creating a significant substitute threat. Thus, we believe the **Threat of Substitutes is and will remain High.**

Rivalry in the United States solar energy housing market is moderate overall, although the potential of renewable energy coupled with the current US administration's aim to boost renewable energy production and consumption will likely boost rivalry in the foreseeable future. A solar housing firm is not only competing with other design firms with differing capabilities but also, as noted above, the usage of other forms of renewable energy from other new ventures as well as existing utilities. Another factor

contributing to the intense rivalry in this industry is the lack of product differentiation which suggests branding will become a distinguishing advantage in the market.

Barriers to Entry into this industry are low. There are already multiple firms in the solar housing industry, although with a variety of expertise. Entry into the market can be done easily with variety of expertise. There are no regulations nor standardized qualifications for new entrants to overcome, particulary design firms that are intellectual capital intensive.

A summary of these industry forces is found in Figure 1 below. In summary, low rivalry, low threat of substitutes, low buyer and supplier power, and high barriers to entry are the ideal conditions for greatest profitability within an industry. The dynamics summarized in Figure 1 suggest the profitability in the solar housing industry are going to be a challenge, although not impossible, to achieve and thus, a firm must be cognizant and well-versed in these challenges and seek to mitigate these forces whenever possible to create a competitive advantage in the market.

Figure 1: Industry Forces Affecting Profitability

Rivalry	Moderate
Threat of Substitutes	High
Buyer Power	Moderate
Supplier Power	Moderate
Barrier to Entry	Low

Competitor Analysis

A thorough investigation of existing competitors will help *Sunternal* understand how to best position themselves in the current marketplace. We have identified Bright Power, Prime SolarPower, and OnForce Solar as the key existing competitors to *Sunternal.* We offer a description and discussion of each as well as how *Sunternal* can distinguish from these competitors below.

Bright Power BRIGHT POWER Smart, Sustainable Energy Solutions

Source: http://www.brightpower.com/

Address: 11 Hanover Square, 21st Fl. New York, NY 10005

Company Description:

Bright Power specializes in multifamily apartment buildings, saving clients energy, money and time. Bright Power's energy management solutions include Energy Score Cards benchmarking software, energy audits, energy procurement, solar energy, green building, and construction management of energy improvements. Their services are designed to help clients make smart decisions and investments that maximize energy efficiency and minimize costs.

Services:

1) Solar Energy 2) Heating/Cooling Design 3) Lighting Design 4) Construction Management 5) Commissioning 6) Energy

Management

Advantages:

Bright Power offers a variety of services for the design and installation of renewable energy and energy efficient equipment for commercial and multi-family residential properties.

Edge Over Competition:

Bright Power targets multi-family apartment buildings while *Sunternal* focuses on the design and building of individual private houses. Since *Sunternal*'s target markets are different from Bright Power, there won't be fierce competition in the current market. However Bright Power may become a competitor in the future as they possibly expand their market to private homes. *Sunternal*'s unique designs and brand recognition will be used to satisfy customers' expectation and needs and maintain competitiveness.

Prime Solar Power

Source: http://www.primesolarpower.com/

Address: 15 Wayne Street, Jersey City, NJ, 07302

Company Description:

As a New York solar company, Prime Solar Power specializes in the design and engineering of solar photovoltaic systems. They employ experts that can assess homes and provide solar designs that will utilize the available space and can meet home energy needs.

Services:

1) Solar Installation 2) Solar Consultation 3) Solar Project Management 4) Energy Efficiency Services 5) Solar Design & Engineering

Advantages:

Prime Solar Power experts take a personal approach to monitoring and fine tuning each phase of their solar design and installation projects to provide customer solutions. They also review customer current utility usage and review customer property for solar readiness. They also will manage the installation process, ensuring all government incentives are obtained.

Edge Over Competition:

Prime Solar Power has strong capabilities in the engineering of solar power installation but lack creativity in design and connecting this engineering capability with design. *Sunternal* is capable of providing more fresh and innovative ideas for design. Also, *Sunternal* recognizes the importance of engineering capabilities as well and will include in their R&D group engineering expertise to mitigate the engineering advantage Prime Solar Power has. The potential of Prime Solar gaining design expertise in the future is real and can result in greater competition from them. *Sunternal* is aware of this potential and will seeking to create a culture of innovativeness as well as branding to continue to maintain a competitive edge in the market.

OnForce Solar 

Source:

http://onforcesolar.com/

Address: New York Main Headquarters 728 E. 136th St., Bronx, NY 10454

Company Description:

OnForce is involved in the sale, design, engineering, development, financial structuring and/or installation of solar energy projects.

Services:

1) Site Assessment & Feasibility 2) Engineering & Design 3) Procurement & Installation 4) Operations & Maintenance 5) REP & Advisory Services

Advantages:

OnForce Solar has years of practical engineering and design expertise and claims to creatively craft solutions to meet the needs of their customers – a capability that they claim truly differentiates them in the marketplace.

Edge over Competition:

While OnForce Solar's claims suggest they are in the same competitive space with similar capabilities to *Sunternal*, a closer review of their work team reveals that the majority of their team members have business and engineering expertise. Although this company is well specialized in marketing their products and designs, including the clear capability to build brand recognition, Onforce does not appear to have architectural design expertise

employed. The quality and uniqueness or *Sunternal*'s designs should offer a unique proposition to the market. However, the potential for OnForce to gain this creative design capability as well as their current capabilities for business development and marketing that far exceed the current capabilities of *Sunternal,* OnForce is and will remain a worthy competitive foe in the industry.

Market Analysis and Recommendations

Long Island Target Market Demographics

The initial target market for *Sunternal* is Long Island, NY. The market for solar housing is growing in Long Island. In an article published by RenewableEnergyWorld.com (Scanlon, 2012) for example, it has been said that even less affluent neighborhoods in Long Island are starting to consider opting for solar-powered homes especially with the introduction of solar panels that can be leased. This means that there is indeed a viable and expanding market for solar housing in Long Island. However, a clear understanding of the target market is needed to ensure proper positioning, marketing, and profitability. This analysis should be repeated for each individual location.

Long Island City Market Demographics:

Male Population: 35.9%

Female Population: 50.9%

Total population for both Male and female: 2,832,882

Median age: 35.3

18 years and over: 74.3%

65 years and over: 12.4%

Graduate or professional degree: 8.9%

Average family size: 3.31%

Total Number of Family households (families): 5,523

Median household income (dollars): 41,994

Source: http://www.zipcodeedo.com/NY/Long-Island/Demographics-Statics

Babylon Market Demographics:

Male Population: 47.78%

Female Population: 52.22%

Median age: 36.5

18 years and over: 74.42% (Male: 34.87%, Female: 39.55%)

65 years and over: 13.16% (Male: 5.14%, Female: 8.02%)

Graduate or professional degree: 8.9%

Average family size: 3.42

Total Number of Family households (families): 76.7%

Median household income (dollars): $93,366

Sources: http://westbabylon.areaconnect.com/statistics.htm

http://www.city-data.com/city/Babylon-New-York.html

Based on the report prepared by the Long Island Power Authority (2011), the residents in Long Island are well aware of clean and renewable energy resources. In fact, there are residential and commercial establishments that have adopted some form of energy efficient system. The government even supports residents to adopt efficient energies in their respective homes. From this, it can be considered that the demographics of Long Island residents and, subsequently, the demographics of the target market of the *Sunternal* are characterized by the following: General residential households composed of working family heads who are able to afford and willing to install solar modules in their homes in order to cut electricity costs while at the same time meeting their demands for electricity or sustaining their current electricity consumptions. Remember that our company's main business model is centered on solar housing and thus, members of residential population are the considered target market.

It is however important to note that the same demographic profile is shared by the company's competitors. Specifically, these competitors include Bright Power, Prime Solar Power, and OnForce Solar.

Long Island Power Authority. *2011 Long Island Population Survey.* 2011 Online. 2 December 2012. http://www.lipower.org/pdfs/company/pubs/popsurvey/popsurvey11.pdf

Production

Sunternal designs solar homes that capture sunlight and convert it to energy. Nowadays, electricity produced from solar panels is becoming more important because people are paying more for their utilities, particularly in Long island. So, we have designed a specific solar house that can meet our costumers' needs and provide satisfaction. Once we design the solar house, we outsource the construction to other company to build the house peer our design specifications that meet our client's requirement.

The competition in Long Island is increasing as more solar companies enter the market. However, *Sunternal*'s design is superior so far to others. This competitive advantage is in terms of uniqueness, quality, durability, affordability and reliability.

Price

The pricing components of *Sunternal*'s solar design are labor, overhead and the solar home package of the *Attain This!* design as the first design offered to the market. *Sunternal* seeks to control costs in order to maintain competitive pricing the market. What makes *Sunternal*'s price competitive in the market is the ability to manage the design and installation processes both internally and through outsourced business partnerships. Since the home designs can be constructed using limit labor expertise, construction can easily be outsourced, coordinated internally by the External Operations VP who has significant expertise in this sector. By managing this entire process we costs can be controlled.

When considering the individual customer, understanding of the income requirements for purchase of the *Attain This!* home is necessary. The average Annual Median Income (AMI) for a family in Long Island is $107,500. Based up the Long Island Housing Authority, a current partner of *Sunternal*, there is a need to target households at 80% of AMI with affordable housing solutions equating to households with an $86,000 annual income. Based upon the mortgage company standard of 28% of gross annual income allowable towards a mortgage payment we calculate that a family with an annual income of $86,000 can afford $24,080 in annual or $2,007 per month of maximum mortgage payments (28% of $86000). Utilizing the mortgage calculating function found at www.cgi.money.cnn.com, based upon a 30 year interest rate of 3.4%, with zero debt, and a tax rate of $3,500 per year and home insurance of $481 per year, the target household with $86,000 in annual income can afford up to $ 458,474 housing price as an aggressive figure with $377,674 in housing price as a moderate figure. Of course, these are maximum home purchase prices and the buying power of customers will be reduced based upon other factors such as additional debt, lower income, and less than excellent credit rating.

Target Market

Identifying a target market for a solar home is a challenge since this is a new industry with a less developed consumer base. A tool for identifying customers and understanding their demographics is to find related products that target customers may purchase. A hybrid car is one such product.

Hybrid cars have become the more practical choice for consumers that are conscious about keeping the environment clean. According to Hybridcars.com the average Hybrid owner in the United States has an income of $100,000 a year and they are older than the standard car buyer. Hybrid owners are usually closer to 50 years old. The website also claimed that the hybrid driver has a higher level of education and more likely to participate in outdoor activities such as skiing, hiking or yoga. According to the US News rankings and reviews website the top three Hybrids in the United States are the 2013 Ford Fusion Hybrid, 2013 Ford C-Max Hybrid and the 2012 Hyundai Sonata Hybrid. *Sunternal* should target and introduce their designs to people who already own

Hybrids as they are more environmentally aware. Sunternal should co-host an event with Hybrid cars manufacturers and dealers

Place

Unites States is the largest country that promotes an energy efficient lifestyle. Long Island has been designated as the best location on the eastern seaboard in terms of the best sunlight. According to the United States Annual Sunshine Map, Long Island enjoys an average of 2,400 to 2,800 hours of sunshine annually and has 100 miles of beaches on both its north and south shores creating additional greater reflective light. In addition, Long Island contains a population of over 7.5 million people, is one of the most affluent areas in the country due to its proximity to New York City, and is the most populated island in the U.S. Overall, Long Island is an excellent place for *Sunternal* to enter into the solar housing sector due to the exceptional sunlight, population, and affluence. .

Promotion

We recommend a promotion strategy based upon the elements of innovative and technologically advanced products, cost savings, crisis management, celebrity endorsements, NYIT leveraging, branding, and corporate philanthropy efforts, through various traditional and social media outlets. The theme of this promotion is "*Sunternal – Light into Life*". *Sunternal* is a firm that cares about renewable energy and its positive impact on everyday life.

Technologically Advanced Products: Solar power technology is improving continually. With a solid R&D capacity of both engineering and architectural design within *Sunternal*, the firm will be able to stay abreast of current technological advancements to be integrated into aesthetically pleasing, innovative designs. Customers will identify *Sunternal* for the most technological up to date yet innovative designs. This takes advantage of the competitive advantage of the creativity and intellectual capital of *Sunternal* that creates a distinction in the market. *Sunternal* uses the latest technologies

and creative designs to utilize the power of solar to generate light to live our everyday lives.

One of *Sunternal*'s leading competitor won "The Best of Long Island Award" and now they are pushing for consumers to vote for them again this year in three categories "Best Alternative Energy Company", "Best Green Business" and "Best Solar Business". *Sunternal* as a firm as well as the founding team should be seeking and exploiting local, national, and international recognition to highlight their innovativeness and technologically advanced products to customers. For example, Tobias Holler won the 2011 NYIT Presidential Technology Award for his use of technology in research and creative expression for his design research on the "LIRR Long Island Radically Rezoned" project. Professor Holler also won a People's Choice Award in the 2010 "Build a Better Burb" contest sponsored by the Rauch Foundation and first place in the d3 Natural Systems International Design Competition for his designs. Professor Altwicker published an article on "Next Generation Housing Project for Hempstead, Long Island" in the book, Architecture of Low Energy Consumption and is also Chair of the Architecture Department at NYIT. These awards and accomplishments should be leveraged in firm promotions, especially as an effort to create a reputation in design and innovativeness capabilities. Customers often look to founder's expertise when evaluating the quality of an entrepreneurial firm.

Cost Savings: While the prior analyses suggest individuals are willing to pay more for solar energy, total housing costs remain a concern particularly in the expensive Long Island market. However, all solar housing firms can offer similar rebate and credit benefits as discussed in detail previously. Thus, while cost should not be the center of a marketing campaign because it is not a source of competitive advantage but simply a source of competitive parity, these savings cannot be ignored either. Rebate and credit benefits must be presented to customers so they are aware of the savings available to them. According to "Horizon Solar", solar house residents of Long Island are entitled to rebates from LIPA, New York State Tax credits, Federal Tax Credits and a New York State Property Tax Exemption. Not including this information in marketing campaigns would be a detriment to the firm. We also recommend *Sunternal* create a partnership

with NYSERDA to get energy audits of designs prior to sales as a marketing tool as well from a cost perspective that would be beyond competitor offerings. NYSERDA is currently offering this to homeowners.

In addition, the technologically advanced homes will also utilize the most efficient technologies available to reduce energy costs for customers as an additional source of cost savings to light their life. Currently, solar power is more cost efficient than fossil fuels used in many homes and the energy and heat from the sun is free if harnessed with efficient and effective technologies. *Sunternal*'s ability to stay abreast of technological advancements through their R&D function comprised of both engineering and architectural expertise will create a capability, currently not existing within competitors, to rapidly adopt and integrate the best and latest technologies. This capability should be marketed to customers who believe they are getting the best technologically efficient home in the market. In addition, *Sunternal* should update their existing homes in the market with the latest technology as a warranty item available to customers. Homeowners can also sell excess electricity back to LIPA as well furthering reducing costs.

.

Crisis Management: Hurricane Sandy hit the eastern seaboard severely in October 2012. Thousands of residents were without electricity and/or generators for days and weeks. Leveraging the recency of this storm with the associated concern for loss of power would create an opportunity to leverage for *Sunternal*. Solar powered homes would be extremely useful during natural disasters where power can be lost for extended periods of time that include light, heat and cooking. *Sunternal*'s homes would be highly beneficial and helpful for all the areas that are more prone to be hit with natural disaster, making it an ideal place to market their designs.

Celebrity Endorsements: Celebrity culture plays a huge part in influencing many American people, particularly the younger set who are more likely to be comfortable with and early adopters of new technologies and a subsequently technologically advanced solar home. While we recognize that other alternative energy products, such as hybrid cars, are purchased by an older demographic, we also believe this is due to product cost

where older customers have greater purchasing power and we anticipate purchases by younger customers as affordable solar homes are introduced to the market. Celebrity endorsements will help legitimize *Sunternal* homes to the masses. For example, Brad Pitt and Ashton Kutcher are a few celebrities in the United States who use solar technology in their homes. *Sunternal* should seek some famous icons that have ties to the Long Island communities to influence those interested in the green movement. If someone like Billy Joel, who grew up in Long Island, lives in a *Sunternal* home, this will have a positive influence on other Long Islanders.

NYIT Leveraging: Advertising within NYIT is a unique opportunity for *Sunternal*. While researching solar power, we found that most of the architecture students within NYIT had not heard of *Attain This! Sunternal* should spread the word amongst students, faculty, and staff at NYIT and get more recognition within the NYIT community. This could be a great promotional starting point for the firm. Promotion can involve sessions where students will be able to express their views and thoughts about solar housing and the project instantly and may also use social media to express their understanding and sights towards the company to the larger community A possible tool to achieve this is to create a *Sunternal* sponsored meetup focused on solar energy held at NYIT Old Westbury campus and open the local community. This is will help leverage the advertising power of Meet-up, leverage the NYIT name to the local community, provide a place for NYIT students to get more engaged, and provide free space for Meet-up events.

Branding: The ability for *Sunternal* to create a brand associated with innovative, efficient, affordable and aesthetically pleasing designs will serve as a key factor in their ability to gain a competitive advantage in what is expected to be an increasingly crowded and competitive solar housing market space. As an early entrant, *Sunternal* should develop steps immediately to develop brand recognition as "*Sunternal – Light into Life*" within the solar housing industry. This branding strategy should incorporate all of the above elements.

Corporate Philanthropy: The concept of corporate of philanthropy is to donate or provide benefits to charitable or non-profit organizations that also are endearing to the target market. For example, *Sunternal* may become a sponsor at Home Expos and Renewable Energy conferences in the area and conduct educational seminars and sponsor renewable/solar energy fairs for students at Long Island schools. Many firms are being challenged to be good social responsible citizens. *Sunternal* should take this to heart and identify ways to give to the community that are meaningful to their business.

Local Media Advertising: Advertising *Sunternal* in local publications in Long Island will be a great way for all those already living in the vicinity to become aware of *Sunternal* and the benefits that come along with going solar. "Long Island Herald", "Long Island Magazine" and "News Day" are some examples of local Newspapers and Magazines that reach the local community and target market. Advertising *Sunternal* on Channel 12, Long islands local news channel, will help awareness and their popularity and reputation.

Social Media: It has been said that social media helps keep people connected but to harness the power of social media as a sole marketing tool remains a challenge for many firms. Thus, social media should be used as a complementary tool to other marketing endeavors. The connection should be built through multiple avenues with social media serving as the way to remain connected to the consumer.

Creating a LinkedIn company page will be highly beneficial and cost-effective for *Sunternal*. The LinkedIn page will act like a mini-website for the company, it will be easy for other LinkedIn members as well as the searching public to find *Sunternal*. LinkedIn is an extremely trusted and reliable platform and is linked to Google search results where people will be able to view it without logging into LinkedIn. It is crucial for *Sunternal* to make sure it's LinkedIn company page is comprehensive and regularly updated with the latest company news and product offerings. *Sunternal*'s LinkedIn recommended URL should be: www.linkedin.com/solarhousing/Sunternal.

Beyond the LinkedIn page, creating an actual website for *Sunternal* will allow customers to know who they are and what they have to offer. Having a website will help

manage the ranking of *Sunternal*. *Sunternal* should use search engine optimization basics to help control where its site shows up and for which inquiries/demand. By building relevant links and creating a brand that customers want to engage with, *Sunternal* sets itself up as an authority in its field and increase its chances of appearing for the right requests.

Twitter is more than just a social media website, almost every company and brand has a twitter account. Twitter is a great way to engage with customers. Twitter will help *Sunternal* participate in industry conversation. *Sunternal*'s target audience and potential prospects are on Twitter where they may be deliberating their annoyances or may even be sharing their positive experiences. It would be great for *Sunternal* to participate in this conversation. Twitter will also create brand awareness; Sunternal can tweet about its latest promotion, events and designs and it will help keep *Sunternal* in social media for people to engage with. Twitter will also give *Sunternal* instant feedback. Tweeting midday has been said to be most effective since this is the time when most people are active on Twitter.

Financial Statements

Reference

Place and Promotion http://www.longislandexchange.com/longisland.html

Advanced Solar Power, Inc. *Advanced Solar Power, Inc. Website.* n.d. Online. 2 December 2012. < http://www.solarli.com/>

Built Well Solar. *Build Well Solar Corp. Website.* n.d. Online. 2 December 2012. <http://www.builtwellsolar.com/onlongisland.html>

Long Island Power Authority. *2011 Long Island Population Survey.* 2011 Online. 2 December 2012. <http://www.lipower.org/pdfs/company/pubs/popsurvey/popsurvey11.pdf>

Scanlon, Bill. "Solar Leases Attracting New Demographics." *RenewableEnergyWorld.com.* 6 April 2012. Online. 2 December 2012. http://www.renewableenergyworld.com/rea/news/article/2012/04/solar-leases-attracting-new-demographic

http://www.zipcodeedo.com/NY/Long-Island-City-11101/Demographics-Statics

Sunteranl Inc.
Cash flow statement - Year 2

Operational Activities	March 31st	June 30th	Sept. 31st
Rent	$ 10,500	$ 10,500	$ 10,500
Salaries	$ 91,250	$ 91,250	$ 91,250
Office Supply	$ 300	$ 300	$ 300

Total Rent	$ 42,000
Total Salaries	$ 365,000
Total Supplies	$ 1,200
Sub-Total	$ 408,200