

blueEnergy

Elevator Pitch (80 word limit)

Over one billion people lack access to both clean water and electricity. This situation is particularly acute in Latin America, where it applies to roughly 75 million rural inhabitants. Using advances in micro wind power technology, *blueEnergy* will produce and install micro wind turbines in local Latin American economies, thus creating jobs and economic activity. These turbines will generate low cost electricity off the grid and will provide electricity to power proven ultra-violet water purification technology.

Business Concept

blueEnergy's primary mission is to provide a low cost solution to the water and energy needs of underdeveloped communities in Latin America and Nicaragua in particular. Toward that end, the company will locally design and manufacture low-cost micro wind turbines and will form strategic partnerships with the water purification industry in order to create integrated wind-water systems. These systems will then be sold to individuals, communities, and small businesses through innovative micro-financing mechanisms.

While the company's wind platform will be manufactured from technology that is readily available, *blueEnergy* will capitalize on its pooling of services, such as training, installation, and maintenance, as well as its strategic partnerships, to establish its position as a leader in the rural water purification and electrification markets.

blueEnergy plans to test and refine its product in Nicaragua where management has a strong political and manufacturing network. *blueEnergy* will use this testing phase to hedge against technical risks, by collecting operational data on both turbines and water purification systems. Management believes that this approach will build a robust track record and will allow the company to leverage its goodwill into greater markets.

Market/Customers

It is estimated that two billion people still lack electricity today, causing energy demand in developing countries to double every eight years. Moreover, the share of total world energy demand by developing nations is projected to increase from 33% to 44% by 2025, with two-thirds of all energy growth projected to occur in new industrializing economies.

According to the International Energy Agency, energy demand in Latin America is expected to double by 2020. Since 1990, almost US\$30 billion in private capital alone has flowed into electricity projects within Latin America, and this trend is predicted to continue into the future.

In addition, there is an on going effort by Latin American governments to invest and provide power to their citizens, to in turn promote economic growth. Management

believes that the increase in demand, a nascent region for renewable energy sources, and an increase in private investments in foreign power projects will make Latin America a considerable market and lucrative venture for new energy systems.

Within this arena of new energy systems, there is a rising social and political demand, at the national and global level, for sustainable energy systems. This demand is in part due to the threat of climate change and has contributed significantly to the dramatic growth rates of the wind and solar markets in recent years. On the regional and local levels there is a rising demand form energy projects that provide strong local benefits in the form of cheap electricity, local employment, and low pollution levels. Thus, renewable energy technology is increasingly being used as a primary source of distributed power. As the cost of extending electricity grids to rural areas remains high and the cost of distributed renewable energy systems continues to drop, this trend will only be reinforced.

Our preliminary field findings indicate that underdeveloped communities throughout Latin and Central America are in the largest need of stand-alone power systems that are capable of supplying both electricity and clean water to its end users. As we conduct further field studies throughout the region we suspect that the potential generating capacity is expected to increase considerably. Given the strong demand for electricity worldwide, cleanly generated electricity in particular, and lack of clean water, there is a significant market for a low density renewable energy technology such as that provided by *blueEnergy*

Entry Point

blueEnergy will focus its initial efforts on Nicaragua. The country has a rural population of which roughly 90%, or 2.0 – 2.5 million, do not have access to electricity or adequate potable water. This represents a large market with a real need. However, the presence of this need is only half of the equation, with the other being the ability to actually deliver a solution. The management believes that it has the strong institutional connections to Nicaragua that will allow it to take the solution from conceptualization to reality. In addition to these specific connections, there are signs that the general energy policy of Nicaragua is favorable to *blueEnergy's* mission, as evidence by the government's stated desire to work with international financing institutions and international non-government agencies to bring about rural electrification.

Competitive Advantage

blueEnergy is not expecting to face strong competition in its mission to provide electricity and potable water to rural communities due to the limited resources of, and risks associated with, the region. However, management does expect to encounter some competition in the form of alternative rural electrification such as diesel generators, solar power, and alternative forms of water purification, such as chlorine. *blueEnergy* will undercut the competition in both areas with price and infrastructure. While diesel generators have a lower capital cost per kW than our proposed turbines, they are very costly to maintain. And the fuel, assuming it is available, is very expensive over the

generator's lifetime. In addition, these generators are over sized for our application and require an up-front investment that is prohibitive to our target market. Solar power, the much cited alternative energy source, has been shown in a comparative cost study, done in Latin America and Asia by the Intermediate Technology Development Group (ITDG), to be consistently more expensive than locally manufactured wind energy. From the water purification perspective, *blueEnergy* will pursue ultra-violet (UV) technology which has also been shown to have significantly lower capital and operational costs than all chemical alternatives. In addition to higher costs, all of these competitive approaches require an extensive network infrastructure to deliver, store, and use their required inputs such as diesel fuel. In many cases this infrastructure simply does not exist and is prohibitively expensive for the competition to develop, thus presenting a barrier to entry and increasing *blueEnergy*'s competitive advantage.

blueEnergy will enhance its competitive advantage by coupling management's cultural and first-hand living experience in the region. Both will serve to increase the effectiveness of local partnerships and mitigate political risks. Moreover, the company plans to leverage already established institutional relationships in the academic, private, and public sectors to serve as formidable barriers to competitive entry in the foreseeable future.

Finances

blueEnergy will be centered on its turbine manufacturing capacity which will be made low-cost by using local labor and locally available materials to the greatest extent possible. From this solid foundation, *blueEnergy* intends to enter into strategic partnerships with ultra-violet water purification services such as those of WaterHealth International to create an end-to-end water and energy service. The sales and maintenance of these integrated wind-water systems will provide *blueEnergy* with a sustainable revenue stream. We believe that *blueEnergy*'s success, exemplified by a large, proven fleet of installed wind-water systems, will serve as the company's primary marketing tool. Management recognizes that information, both good and bad, travels quickly in close-knit rural communities and believes *blueEnergy*'s results will largely market themselves and help ensure continued success and growth.

Drivers

Initially, the company's revenue growth will be driven by the sale of its micro-wind turbines and its ability to engage additional clients throughout the region. Based on the nature of the company's target market and on the tremendous need for the company's services, management believes that revenue growth will directly correlate to the company's ability to effectively train qualified technicians to service additional clients. However, the company understands that the quality of its product and the strength of its relationships with government officials are more valuable to its revenue stream than merely servicing additional clients.

Income Statement

The Company's Earnings Projections Are Achievable

Below is a summary of the projected income statement, which was developed in keeping with the standard growth rates and costs for the micro wind industry. The projected income statement reflects the company's estimate of demand in its field of focus. The projections below are for the fiscal year ending December 31(FYE), where the Company expects to begin operations in 4Q of 2003.

Revenue growth rates will be driven by the Company's ability to sell and install its micro turbines throughout region. Given the fundamentals of our socially conscious venture and purchasing power of our clients, management does not believe that an increase in the pricing point of \$500.0/unit will be an effective tool in revenue creation. Therefore, management believes that volume and political relationships will be the driver to a sustainable revenue stream. The projection period from 2003E to 2006E estimates 21 wind systems producing revenues of \$10,800 during 4Q 2003 and a total of 3300 wind/water systems sold producing revenues of \$2.9 million and an operating profit of \$406,200 for the third full year of operations 2006. These growth rates are reasonable due to the following:

- *Increased Government Spending on Renewable Energy Sources:* The International Finance Corporation has secured a \$250.0 million fund for investment in small to medium size renewable energy projects. Moreover, there is an additional \$25.0 to \$30.0 million from the Global Environmental Facility which will focus on small scale energy sources.
- *Solid Outlook for Need:* The threat of global climate change has become a catalyst for the social and political demand for a transition to sustainable energy, and is largely responsible for the dramatic growth rates of the wind and solar markets in recent years. Such energy demands, coupled with the increasing need for clean

water in these same regions will allow *blueEnergy* to benefit from new platform development as well as modernization spending.

During the first two years of operations, 2004 to 2005, the company projects a negative operating profit of (\$300,000) and (\$600,000) respectively. Operating profits are projected to turn positive and be \$406,000 by the third year of operations, 2006. These growth rates are reasonable due to:

- *Improving Margins:* As the company increases sales volume and installations in the region it will be able to leverage its goodwill to improve utilization of its facilities which will also increase margins. This improved utilization will also continue as *blueEnergy* enters additional markets throughout Latin America.

In order to mitigate collection risks, management will seek partnerships with local financial institutions which will finance *blueEnergy*'s account receivables. Such practice is common in developing nations and management does not believe that *blueEnergy* will encounter barriers from such institutions. Within the operating profits, management has included an "Adjustments" line item which includes the financing fees. For FYE 2003 to 2004, management projects financing fees of 20.0% as a percentage of revenues. However, management believes that as the *blueEnergy* brand name becomes more robust, fees will decrease. Thus, financing fees are projected at 10% of revenues for FYE 2005 to 2006

Start-Up Investment

blueEnergy expects a robust financial return for its investors without jeopardizing a significant social and personal return for its clients and, most importantly, for its end-users: underdeveloped villages lacking electricity and potable water. Because of this, we suspect that seed capital will be obtained from entrepreneurs who are looking into diversifying their portfolios with socially conscious projects. Going forward, we believe that such engagements will attract the interest of major non-government organizations that are looking for a project with a proven track record. However, management expects to chart a financial course and strategy that will not compromise later stage financing from investors seeking to tap into the vast potential of the global renewable energy market.

In order to launch its vision, *blueEnergy* is seeking \$1.0 Million in investment capital to fund operations for its first 15 months of operations. During this start up stage, the company plans to generate roughly \$85,000 in revenue as it establishes manufacturing and staging bases throughout Nicaragua. During the second full year of operation, 2005, *blueEnergy* will seek its second round of financing to greatly expand its manufacturing base. In the third year of operation, *blueEnergy* intends to expand into the greater Latin American and Caribbean markets, leveraging its experience gained in Nicaragua. By the third year of operation, the company intends to be generating revenues in excess of \$2.9 million and turning an operating profit of approximately \$400,000.

blueEnergy's mission balances social return with financial interest. While the company will be structured as a socially focused entity and expects a profitable return for its investors, it expects equally significant social and personal returns for its clients and, most importantly, for its end users.

Team Description

Rolo Duarte will coordinate *blueEnergy*'s fundraising effort. Rolo has over eight years of power generation project management experience with Westinghouse Electric Corporation and most recently spent two years as an associate in the Mergers and Acquisitions group at Bear Stearns. Rolo has also served in the US Air Force, holds a BS in Electrical Engineering - Magna Cum Laude, from the University of Florida, an MBA from Columbia Business School and is currently on a one year fellowship at Harvard University, John F. Kennedy School of Government completing a Master of Science in International Development.

Mathias Craig will lead the company's technical development and strategic technological alliances. Mathias has over four years of wind turbine technology experience and has forged an alliance with Hugh Piggott, a leading figure in the micro wind turbine industry. Mathias has extensive living experience throughout Latin America and a deep understanding of Nicaragua in particular. He holds a BS in Civil and Environmental Engineering from the University of California, Berkley and is currently a candidate for a Master of Science in Information Technology at the Massachusetts Institute of Technology.

Ricardo Jimenez will lead the effort to establish and maintain *blueEnergy*'s critical social networks. Trained as an architect, Ricardo founded an NGO in Columbia and has worked on the Renewable Energy Initiative of the Organization of American States. He has also advised the city of Beijing, China, and is experienced at establishing partnerships with local cooperatives and communities to implement social and community development strategies. He is a candidate for a Master of Science in International Development from the Massachusetts Institute of Technology.