## Business plan for project karagwe



Business Plan for Project Karagwe January 2000 SECTION Executive Summary Company Overview Products & Services Industry & Marketplace Analysis Marketing Strategy Operations Strategy Development Strategy Management Team Financial Summary Offering Appendix A-Maps Appendix B-Schematic Diagram Appendix C-RE Enterprises Appendix D-Survey Description Appendix E-Board of Advisors Appendix F-Resumes of Founders Appendix G-Financial Statements PAGE 2 3 4 5 8 11 13 14 15 18 20 22 23 24 25 27 28 1 Company Overview. Ambeeka Energy Solutions will empower the world's underdeveloped communities through the application of solar and wind energy technologies. The company will become the world's leading provider of renewable energy (RE) products and services, with projects potentially spanning all seven continents, by 2014. Industry & Marketplace Analysis. One third of the world's population has no electricity. The majority of these people live in rural, remote areas of the world's poorest nations. Global development is a multi-billion dollar industry, with the World Bank providing huge sums of money to fund large-scale projects. In the past ten years, global electricity demand has grown by 40%. During this time, the use of RE has expanded at ten times the rate of fossil fuels. Experts predict that the world's electricity demand could triple by 2020, a colossal increase that will be fuelled by the industrialization of developing countries. As a specialty provider and integrator of RE systems designed for developing communities, Ambeeka will position itself to capitalize on this explosive trend. Ambeeka will establish its first project in Karagwe, Tanzania, which lies near the western shore of Lake Victoria, deep in sub-Saharan Africa. Products & Services. Ambeeka will introduce affordable electricity to Karagwe by offering attractive financing options for solar electric systems. This will

enable families to make purchases in small monthly installments, in the same way that a consumer would buy an automobile in the United States. In addition, Ambeeka will construct a 15, 000-watt solar/wind power station and community center, where services such as electric coffee processing, water pumping, refrigeration, computing, telecommunications access, and Internet browsing will be sold. This community center will also serve as a nucleus of education, where Karagwe residents will be exposed to a contagious spirit of entrepreneurship. The services provided here will enable, motivate, and educate people to start new businesses. In this way, Ambeeka's presence in Karagwe will substantially boost the region's economic prosperity. Marketing Strategy. Karagwe is a dispersed farming community of 350, 000 people. The area is so remote that power lines may never be extended there, and only 2% of the population has electricity. Ambeeka's target customer is a Karagwe family that earns about \$700 per year. A basic solar electric system will be priced at \$288, or \$24 per month. Market research conducted in Karagwe strongly suggests that this price is feasible, despite the fact that it represents 45% of a typical family's annual income. Currently, Karagwe families use crude and dangerous kerosene lamps to light their homes, and expensive dry-cell batteries to power their radios. A solar electric system is safer, more reliable, provides better lighting, and promises better value than the alternatives mentioned above. Construction of the power station and community center will advertise Ambeeka's dedication to a sustainable, long-term presence within the community. Ambeeka has partnered with a local company called the Columbia Solar Electronics Workshop (CSEW). Working with CSEW, Ambeeka will sponsor informational forums to educate customers about the economic benefits of financing, the technology behind

solar electricity, and the use of electricity in cultivating a prosperous economy. Operations and Development. In October 2000, Ambeeka will begin building the power station and community center. An expert in the RE field has been recruited to design this station, and to oversee its construction. CSEW will run all operations of the business in Karagwe, including inventory handling, payment collection, product distribution, and maintenance repair. All power systems will be sold to customers as prepackaged kits, assembled by CSEW employees. Management Team. Jason Spellberg, Ambeeka's founder, is completing his MBA in Entrepreneurship at the University of Colorado. He has traveled extensively in East Africa, and has forged a business partnership with Gaspar Makale, owner of CSEW. As permanent employees, the founders will seek, identify, and finance lucrative new project opportunities all over the world. Mr. Makale will also oversee Ambeeka's operations in Karagwe. Summary of Financials and Offering to Investors. In Karagwe, solar kit financing will generate almost \$800, 000 of net income, and \$2. 7 million in accumulated cash, by 2006. Ambeeka will seek \$1 million in a single round of seed financing to fund the construction of the power station and community center. Ambeeka will seek this capital from private accredited investors, non-profit relief agencies, or possibly as a partnership with a global technology company interested in penetrating emerging markets. Ambeeka's presence in Karagwe will drastically improve the community's prosperity, thereby building real demand for electronics and telecommunications products and services. In exchange for capital and strategic support, Ambeeka will offer an investor equity, and will additionally offer a partner company direct, unlimited access to these markets at the grass-roots level. Ambeeka is dedicated to improving the lives of the world's

underprivileged people by promoting the use of clean renewable energy. Therefore, Ambeeka also offers investors association with this noble initiative. 2 The name Ambeeka derives from an ancient Sanskrit word meaning "energy" or "illumination." Appropriately, therefore, the commitment of Ambeeka Energy Solutions will be to spread technologies for harnessing renewable energy (RE). The term "renewable" refers to sources of energy that can never be diminished or exhausted, such as wind and sun. The most common commercial RE technologies are photovoltaic (PV) modules, wind turbines, and, increasingly, fuel cells, which produce electricity from solar radiation, wind, and hydrogen, respectively. Vision Statement To Become the World Leader in the Creation, Development, and Deployment of Technologies that Converge the Advancement of Human Civilizations with that of the Environmental Condition Three-Year Mission Statement To Profitably and Sustainably Introduce Renewable Energy Into the World's Underdeveloped Communities Current Status Ambeeka Energy Solutions will be organized as a Delaware C-corporation, with an executive office in Boulder, Colorado, USA, during the first quarter of 2000. The company will serve as a for-profit holding, investing, and consulting agency, and will work in partnership with developing communities to establish sustainable RE projects all over the world. Market & Services Ambeeka will immediately specialize in providing electricity and electric services for rural communities, and will utilize two different business strategies to distribute power. First, Ambeeka will sell solar electric systems for home and commercial applications by allowing customers to finance the cost of these systems over time. Second, the company will offer end-user services direct to customers by establishing electrified community centers in the heart of

their villages. At these centers, people will be able to purchase services ranging from crop processing to refrigeration to telecommunications access to internet browsing. Objectives Ambeeka's first RE project will be in Karagwe, Tanzania, a remote agricultural community in East Africa. The company will aggressively expand into a global provider of RE products and services by seeking new opportunities in other parts of Africa, as well as in Asia and Latin America. By 2014, Ambeeka will be the world's undisputed leading provider of RE products and services, and will operate Research & Development divisions for creating innovative novel technologies that address the environmental crises of the 21st Century. This business plan will present Ambeeka's strategy for getting started, by establishing a profitable and sustainable RE business in Karagwe, Tanzania. 3 Description of Services Ambeeka will offer financing packages for home and commercial-scale solar electric systems. The retail price of a small solar electric system in rural Africa is around \$800. Ambeeka will enable Karagwe customers to purchase systems in affordable monthly installments, similar to the way most people in the United States purchase automobiles. These financing options will be especially popular in poor communities such as Karagwe, where affordability drives a preventative wedge in a customer's ability to buy. This business plan will mainly describe the financing aspect of Ambeeka's operation in Karagwe. To solidify people's confidence in these financing options, and to demonstrate the company's dedication to the community, a 15, 000-watt solar/wind power station and community center will be constructed in Karagwe. A number of end-user services will eventually be provided at this community center, such as coffee bean processing, food storage and refrigeration, battery charging, water distilling, computing,

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telecommunications access, and Internet browsing. In addition, an educational center will be instituted, where customers will learn how to use electricity and technology to start new businesses, or to expand existing ones. Most of these services will be provided within a year after Ambeeka's initial establishment in Karagwe, but eventually they will generate as much as 75% of the company's revenue. All of these services will be designed to help Karagwe residents augment their incomes. In this way, Ambeeka hopes to foster economic activity, and thus prosperity, within the community. This business plan will not describe the community center aspect of Ambeeka's operation in detail, but the offering of these services is part of the company's long-range plan for development in Karagwe. Proprietary Rights In Karagwe, and in all other project sites, Ambeeka will seek partnership with a local organization to help with operations, marketing, legal negotiations, and other important aspects of conducting business. Ambeeka's partner in Karagwe is a natively owned company called the Columbia Solar Electronics Workshop (CSEW). CSEW was founded in April 1999 by Mr. Gaspar Makale, a Tanzanian electrical engineer and entrepreneur. Mr. Makale and Mr. Spellberg, Ambeeka's founder, are close friends, and have been in business together for close to two years. It is virtually impossible for any foreign company to conduct effective or sustainable business in a poor, developing community without trustworthy local contacts. Besides CSEW, there is no company in Karagwe that has the technical capability, or the entrepreneurial innovation, to establish a joint venture of this kind. As such, Ambeeka is confident that no other foreign company will be able to enter this market. Stage of Development Although fifty years of market exposure have proven RE technologies to be unequivocally reliable and durable, the commercial RE

industry is still in its infancy, and the electricity markets in developing parts of the world remain almost completely untapped. A business solution is needed to meet the challenge of profitably selling this expensive, high technology equipment to people with meager incomes. In the past five years, a number of strategies have been implemented in rural, developing markets with astounding success. Almost all of these models have extended a microcredit or financing option to their customers. These successful companies, which will be further discussed in the Industry Analysis section, have proven the efficacy of the business model that Ambeeka will apply in Karagwe. 4 Industry Analysis As an RE service provider targeting emerging markets, Ambeeka will compete in the industry known as Renewables for Sustainable Village Power (RSVP). RSVP is a small, but fast-growing subset of the gigantic global energy industry, which is currently experiencing an economic revolution. One significant characteristic of this revolution has been astonishing growth. Over the past ten years, for instance, the world's demand for electricity has increased by 40%. Experts predict that, as industrialization sweeps developing countries, current demand could triple by 2020. 1 Because so many new electricity users live in remote areas, most of this increased demand has been, and will continue to be, serviced by RE. As a result, renewables are by far the fastest growing segment of world energy use, as is shown in the following chart. 2 27% Global Trends in Energy Use, Annual Growth Rates (1990--1998) 24% 21% 18% 15% 12% 9% 6% 3% 0% Hydroelectric Natural Gas Geothermal Nuclear Solar PV Coal Wind Oil The second trend of importance is privatization and deregulation. Over the past five years, this has been a global contagion, especially in developing countries, where governments continue to implement aggressive policies

designed to attract foreign investment. Tanzania, for instance, adopted the National Investment Promotion and Protection Act in 1990, which guaranteed the privatization of several key industries, including energy. The opening of these economies has sparked the proliferation of scores of small, entrepreneurial energy companies striving to profitably satisfy the need for rural energy development. Some, such as the Grameen Bank of Bangladesh, the Solar Electric Light Fund of Thailand, and Soluz of the Dominican Republic, have developed profitable business models based on selling solar electric systems through micro-credit arrangements. 3 Meanwhile, large companies such as Enron, Shell Oil, and British Petroleum/Amoco have established dedicated RE divisions, and are aggressively executing multimillion dollar RE projects in places such as Indonesia and South Africa. But despite this recent surge of activity, the RSVP industry still faces some imposing challenges. For example, the vast majority of people who most need RE technologies still cannot afford them. Substantial increases in enduser purchasing power have remained elusive, and, as a result, sales are not close to what they could be. Consequently, RE manufacturers have been unable to drive economies of scale enough to cost-compete with fossil fuels. Another problem 1 2 " PowerGen Energy 2020 Report, " Oxford Economic Research Association, September 1997 " Coming of Age in the Energy Revolution, "Christopher Flavin and Seth Dunn, Renewable Energy World, July 1999 3 Please see Appendix C for a more complete list of entrepreneurial RE enterprises 5 is the lack of skilled RE technicians in developing countries. There are only a handful of training centers in the world teaching RE system installation. Finally, international turmoil remains an imposing obstacle. In many countries, political and economic instability

has prevented the long-term investment and presence needed to sustain RE projects. These challenges are typical of any global industry that is only just beginning to mature, and real progress is being made to address them. Over the past decade, for instance, PV production costs have been reduced by 80% (an additional 50% to 75% is required to cost compete with coal-fired electricity). Furthermore, experts predict that economic and industrial development in emerging countries will lead to a 100% increase in world income by 2020. 4 As prosperity builds demand for electricity, RE training centers are being established in the developing world, such as the highly respected Karadea Solar Training Facility in Karagwe. Furthermore, despite civil wars and social unrest, there are scores of developing countries, like Tanzania, where political stability harbors fantastic economic opportunity. Many experts predict that this global " Energy Revolution" contains the seed that will become the world's premier growth industry of the 21st Century. Marketplace Analysis Tanzania. Tanzania is the largest and most peaceful nation in East Africa. The country has demonstrated over 38 years of political stability, and is governed by a multiparty democracy based on English common law. Tanzania has posted an average annual economic growth rate of 3.5% over the past ten years, however inflation currently lingers at 13%. 5 Tanzania's GDP is expected to grow at 5.5% annually through 2002. 6 Agriculture is the nation's primary industry, accounting for 56% of its GDP, and employing over 90% of its workforce. Only 24% of Tanzania's population live in urban areas, meaning that the country's 32 million people are widely dispersed over an area more than twice the size of California. 7 Between 1986 and 1991, demand for electricity in Tanzania grew at an average annual rate of 10. 2%, a trend that is expected to continue. Over 75% of

Tanzania's electricity consumers are served by hydroelectric power, and the country experiences generation shortfalls during drought conditions. Almost all of Tanzania's electricity usage is confined to its urban areas. 8 Karagwe. Karagwe is a remote farming community in the northwestern corner of Tanzania, about 100 kilometers from the western shore of Lake Victoria, at a geographic position of two degrees south latitude. 9 The region experiences two dependable rainy seasons per year, and receives an annual average of about five peak sun hours per day, roughly 10% more than Denver, Colorado. About 350, 000 people, or 60, 000 households, live in this region, which is situated on a wide, sloping ridge at an elevation of 1, 650 meters (5, 400 feet) above sea level. The prominence of this ridge above the surrounding plain leaves it exposed to the tropical trade winds, which consistently blow from the west. There are few regions in the world that boast such abundant RE natural resources. Almost every household in Karagwe is surrounded by a plantation of several hectares, and coffee is the community's chief cash crop. The average yearly income is about \$700 per family, and, though this is strikingly poor by western standards, Karagwe is one of Tanzania's most prosperous rural communities. Customer Analysis Karagwe is an extremely dispersed village, with 350, 000 people living in an area of 3, 200 square kilometers. As a result, only 1. 4% of Karagwe's most centralized homes and businesses are electrified by the regional utility grid, while 0. 6% are electrified with solar power. The remaining 98% have no hope of seeing the grid extended to their homes during the next ten years. 10 Residents of Karagwe realize that modernization cannot take place without electricity, and that access to electricity will significantly enhance their economic prosperity and quality of life. As a result, it is no surprise that

100% of the fifty or so Karagwe residents surveyed during the summer of 1999 indicated a strong desire to participate in a financing program that would allow them to afford a solar electric system. 11 Karagwe families live in large houses, typically constructed of brick and concrete. Each house has three to five bedrooms, a kitchen, a living room, a washroom, and an animal pen. Families submit no property taxes or mortgage payments. Furthermore, because Karagwe is a farming community, residents spend very little on food, except for the 4.5 " PowerGen Energy 2020 Report, " Oxford Economic Research Association, September, 1997 "Tanzania, Economic Trends and Outlook, "Country Commercial Guides, International Trade Administration, U. S. Dept. of Commerce, October 1998 6 " Tanzania at a Glance, " The World Bank, October 1998 7 CIA World Factbook, 1999 8 International Electric Power Encyclopedia, p. 156, 1998 9 Please see the maps featured in Appendix A 10 Personal Interview with the head manager, Karagwe office, Tanzania Electric Supply Company 11 A description of this informal survey is provided in Appendix D 6 few items, such as rice and fish that must be imported from surrounding districts. Very few people in this village possess an automobile, and those who do earn three to ten times more than the average yearly income. Aside from a handful of bars, restaurants, grocery stores, and weekly farmers' markets, Karagwe offers very little for the consumer. Because there is not much in this community to spend money on, Karagwe families tend to retain a purchasing power that is greater than half of their annual income. 12 Nevertheless, due in large part to the inflationary pressures and banking crises that have plagued Tanzania ever since the 1960's, people are generally unfamiliar with the concept of saving money. Only in the past few years have stabilized banks begun to earn the trust of

Tanzanian consumers, and in the rural parts of the country, this trend is proceeding guite slowly. Despite these simplistic financial tendencies, the typical Karagwe resident is guite sophisticated, and understands the benefits of solar electricity. Karagwe is home to Africa's most distinguished solar training facility, where Ambeeka's Africa Operations Officer, Mr. Gaspar Makale, is chief of faculty. Because of the international recognition of this school, Karagwe residents know that solar electricity represents a clean, safe, and reliable way to power their homes. Unfortunately, however, even a small solar electric system costs about \$800 retail in Africa, and only the richest families can afford this price. As a result, most families continue to light their homes with crude kerosene lamps, and to power their radios with inefficient dry cell batteries. Nevertheless, the demand for solar electric systems latently exists in Karagwe, and it is up to Ambeeka to tap this market potential by making these systems affordable for the average Karagwe family. Competitor Analysis Competing Technologies. Because solar electric systems are so expensive in Karagwe, they are viewed as luxury items. Almost every family would love to have one, but affordability is a preventative issue. As such, people must use more conventional methods of lighting their homes. Kerosene and dry cell batteries are readily available in Karagwe, but neither item is particularly cheap. Kerosene sells for about fifty cents per liter, and a typical family uses four to six liters per month; many organizations, such as schools and health clinics, use twenty to fifty liters per month. Dry cell batteries retail for about \$3.00, and may last two or three weeks at the rate most families use their radios. Some families also own gasoline gensets, while still others own automobile batteries, which they charge with gensets, or at a grid station in the central part of the village. 13

Ambeeka's chief competition in Karagwe is certainly kerosene and disposable batteries, and solar has several advantages over them. First, kerosene lamps are crude and dangerous; it is easy to find an adult in Karagwe who has been burned, at some point in his or her life, by a kerosene lamp leaking, spilling, or completely exploding. Furthermore, kerosene lamps provide lighting that is only somewhat better than a large candle, and they tend to be noisy and smelly during operation. Dry cell batteries are expensive because they must be replaced so frequently, and their disposal poses a serious environmental threat. Also, many appliances cannot be powered with batteries. A solar electric system, on the other hand, is clean and safe, and provides the familiar fluorescent, white light that can illuminate an entire room. Furthermore, a solar electric system can be used to power any electric appliance. It offers modularity, flexibility, and expandability, so that one single power source can be used for the house's every electrical need. Additionally, these systems are extremely reliable, and require only minimal maintenance on, and periodic replacement of, the battery. If well maintained, a solar electric system will last for thirty years. Solar electric systems are more expensive than conventional alternatives in the short-term, but in the long run provide a far superior value for the money. Competing Service Providers. Aside from Ambeeka's partner, CSEW, there are no businesses or organizations providing solar electricity in Karagwe. Furthermore, there is not a single organization in all of northwestern Tanzania that offers financing for solar electric systems. The national utility, the Tanzania Electric Supply Company (TANESCO), has no intention of expanding the utility grid into the periphery of Karagwe for at least ten years. Furthermore, this company has no understanding of solar

electricity, and maintains only a minimal presence in Karagwe. TANESCO is not equipped to effectively compete in this marketplace. 12 13 This information was gathered on-site in Karagwe by Mr. Spellberg during the summer of 1999 This information was gathered on-site in Karagwe by Mr. Spellberg during the summer of 1999 7 Target Market Strategy In order to make solar electricity affordable, Ambeeka will offer families and businesses the option of paying for their system in twelve monthly installments. The smallest kit offered will be priced at \$24.00 per month. This translates into a year-end price of \$288, which is a tremendous saving over retail. Because people in this region maintain a purchasing power equivalent to about 50% of their annual income, Ambeeka's principal target market is families that earn at least \$600 per year. It is estimated that roughly one-third of Karagwe's households earn this amount or more, meaning that Ambeeka's primary target market in Karagwe consists of about 19, 000 families. 14 Service Strategy Financing Terms. Many micro-credit programs have failed in developing communities because customers have been allowed to default on their loans. It can be extremely difficult both logistically and financially to repossess equipment in remote villages of foreign countries. To circumvent this problem, Ambeeka will offer "pre-financing" plans to its customers. Under the terms of these pre-financing options, customers will have to pay their entire balance before Ambeeka will give them a system. There are two reasons why this is necessary in Karagwe. First, people in developing countries often do not understand the concept of credit, and, especially when an American company is the lender, regularly assume that " credit" means "free. "Second, industrialized nations have repeatedly allowed governments and businesses in the developing world to default on their

debt. People in these communities, Karagwe included, are accustomed to receiving free handouts from the World Bank and industrialized governments. It is unlikely that Ambeeka can establish a high-growth, sustainable business in Karagwe if expensive electrical systems are provided, but money is not collected. As such, customers will pay for their systems first, in entirety, before they receive them; no exceptions will be allowed. Because the financing plans will have one-year terms, Ambeeka must offer customers something while they pay for their electric systems. This is where the community center will be useful. During the terms of their financing contracts, Ambeeka's customers will be allowed to utilize all services at this community center free of charge. These privileges will end upon fulfillment of the financing agreement, or if a customer defaults on several payments. This strategy will allow Ambeeka to collect money before distributing systems, and will encourage customers to fulfill their financing agreements. Ambeeka will gladly accept down payments for customers desiring shorter financing terms. Solar Electric Kits. Ambeeka's solar electric systems will be sized to meet the needs of a typical Karagwe household. Very few Karagwe homes have the need to power anything more extravagant than a few fluorescent lights and a radio, and therefore these systems will be small by western standards. Each system will come with a solar panel, a deep-cycle battery, a charge controller, lights, a radio, wiring, connectors, and mounting materials. In order to serve the expected high demand for affordable solar electric systems in Karagwe, all systems will be sold as pre-assembled kits. These kits will be designed to be so simple that end-users will be able to perform the installations themselves. In this way, Ambeeka will minimize the size of its technical staff. Initially, there will be

three kit sizes offered. Table 1 presents a spec and price comparison of Ambeeka's introductory product line. For homes or businesses requiring more power, customized systems will also be available. Furthermore, as the community becomes more prosperous, people will develop more extravagant tastes for electric appliances and equipment, such as television sets, satellite dish receivers, refrigerators, and computers. Ambeeka will continuously readjust this product line according to customers' power needs. In addition, attractive trade-in and scale-up plans will be offered to customers in subsequent years, so that smaller systems can be traded in and up-graded to larger ones. Table 1. Ambeeka's Initial Product Line Kit 1 2 3 Size 13 watts 30 watts 48 watts Components 1 light, 1 radio 2 lights, 1 radio 3 lights, 1 radio Price/Month \$24.00 \$48.00 \$72.00 Price/Year \$288.00 \$576.00 \$864. 00 Gross Margin 72. 46% 80. 00% 94. 59% 14 Based on research conducted in Karagwe by Mr. Spellberg, summer 1999 8 Pricing Strategy Ambeeka will price these kits as low as possible while still yielding an attractive profit. Based on Winrock's experience in Indonesia between 1994 and 1998, it is expected that a family living in an impoverished, rural agricultural community will surrender about half of its yearly income for a necessary item such as reliable electricity. 15 With the pricing strategy that Ambeeka has adopted, Karagwe consumers will pay less than half of what a comparable solar electric system would cost from a typical African retailer. Distribution Strategy The community center will be used as Ambeeka's administrative office and distribution hub. Most of the components of the solar electric kits will be shipped by sea from suppliers in the U. S. or Europe to the Indian Ocean port of Dar es Salaam, then trucked overland to Karagwe. Ambeeka will also attempt to identify reliable suppliers in South

Africa to reduce its dependence on overseas shipping. Upon arrival in Karagwe, CSEW will be responsible for assembling all components into complete solar electric kits, ready for installation. When customers have satisfied their payment schedules, they will be cordially thanked for their business, and invited to pick up their kits from the community center. At this time, customers will be given written instructions on how to install and maintain their new systems. During their payment period, and throughout their duration of ownership, all Ambeeka customers will be invited to attend free educational workshops on using, maintaining, optimizing, and expanding their solar electric systems. Advertising & Promotion Strategy Ambeeka will rely greatly on publicity and word-of-mouth advertising to promote these financing plans. The construction of a 15, 000-watt solar/wind power station and community center will be tremendous news in Karagwe, and will therefore serve as a very useful promotional tool. Residents will be unable to avoid noticing the sheer scale of this project. Over 100 people will be employed in this undertaking, and every newspaper and radio station in the region will publicly monitor its progress. Like many rural agricultural villages, Karagwe is a tight-knit community, and people tend to be extremely social. Ambeeka will have to do little to instigate excitement and conversation about this project. Once built, the generating facility, featuring a 10, 000-watt wind turbine perched on an eighty foot tower, and a 5, 000watt array of sleek solar panels mounted on a 10, 000 square-foot scaffold, will serve as a constant advertisement of the electricity that Ambeeka offers. Due to the visibility of this project, Ambeeka will ensure that high standards of professionalism are maintained at all times. Embroidered uniforms will be distributed to the CSEW technicians that maintain and

operate the community center. New, high-quality equipment will be purchased, and the community center itself will have a clean, modern design. Service will be prompt and courteous, and technicians will be well trained and well paid. To complement the publicity aspect, Ambeeka will also post billboards in the heavily trafficked "downtown" area of the Karagwe district. The main purpose of these billboard advertisements will be to inform and remind customers of scheduled educational training sessions and technical demonstrations being held at the community center. In addition, posters will be used to announce new service offerings or price adjustments, as needed. Finally, professionally printed brochures, featuring concise descriptions of the financing plans offered, as well as general information about solar energy, will be widely distributed. Sales Strategy Gaspar Makale, the founder and executive officer of CSEW, is a native of Karagwe, and has been installing solar energy systems there for eight years. Mr. Makale's expert reputation is common knowledge in the community. All sales and operational responsibilities will be contracted to CSEW, taking advantage of Mr. Makale's contacts and stature in Karagwe as a solar energy professional. Because CSEW's name is already well known to the community, customers will be dealing directly with a local company that they trust. A customer service office and reception desk will be established at the community center, and CSEW will collect payments at this location. In exchange for these services, and for using the CSEW name to generate trust and loyalty, Ambeeka will pay CSEW a contracting fee based on sales volume. Therefore, CSEW will have an incentive to aggressively generate sales by subscribing new customers, in whatever fashion they deem appropriate or effective. Marketing & Sales Forecasts Ambeeka's projected target market in Karagwe

is about 19, 000 families. There are 58, 000 families in the region without electricity. However, these pre-financing plans will be expensive. Furthermore, customers will have to pay all 15 " The Windpower for Islands and Nongovernmental Development Project with Site Descriptions, " preliminary draft by Winrock International for USAID, 1995 9 of their monthly installments before receiving any equipment. Ambeeka recognizes that this will initially dissuade many potential customers. However, the construction of the power station and community center, as well as the partnership with CSEW, will help to reinforce Ambeeka's trustworthiness, and should neutralize some of these concerns. In addition, Ambeeka will allow subscribed customers to use the community center for free during their contract term. This means that customers will be able to enjoy free access to computers, refrigeration, water distilling, coffee bean processing, telecommunications access, and other services, for up to a year. Ambeeka anticipates subscribing about 250 families in 2001, the first year of operation. After one year, Karagwe residents will witness the delivery of solar electric systems purchased the previous year by their friends, neighbors, and relatives. The demand for these financing contracts will therefore increase exquisitely over the next five years, as Ambeeka's trustworthiness becomes confirmed, and its presence accepted, by the community. Furthermore, similar projects in other parts of the world have demonstrated that the availability of energy systems motivates people to increase their income by working harder, and then to save more of that income, in anticipation of having something valuable to buy. As a result, more Karagwe families will be able and willing to afford Ambeeka's financing plans over time, and the growth rates built into Ambeeka's revenue forecasts reflect this expectation.

Table 2 shows sales and revenue forecasts for the years 2001—2006. Table 2. Sales & Revenue Forecasts 2001 Units Sold Revenues 250 \$84, 240 2002 750 \$252, 720 2003 1, 875 \$631, 800 2004 2005 2006 8, 438 \$2, 843, 100 3, 750 5, 625 \$1, 263, 600 \$1, 895, 400 10 Damien Bonaphaite, a primary school teacher in Karagwe, arrives home after a long day of work. It is nighttime in Africa, and pitch black envelops the quiet community. There are no street lights, no glows in the neighbors' windows; only the brilliant stars of the southern cross provide illumination. But on this night, Mr. Bonaphaite arrives to find his house teeming with activity. The solar electric system he spent a year buying has finally arrived, and his family is already putting it to good use. His wife is busily cooking in the kitchen, his eldest son studiously doing homework, and his two youngest children playing Monopoly, all possible due to the streaming radiance provided by the fluorescent lamp in the living room. Had this been a typical night in a typical Karagwe house, Mr. Bonaphaite would have to wait his turn to use one of the household's two kerosene lamps, for he has about thirty exams to grade. In other words, he would be up late, long after his family had retired for the night. But as he greets his family working and playing under this new artificial sun, Mr. Bonaphaite realizes that the "typical" Karagwe evening has now changed forever. Operations Strategy Customers will start their lifetime relationship with Ambeeka upon receipt of their first solar electric kit. In time, they will learn to effectively apply the full potential of solar energy, and they will completely replace archaic kerosene lamps and dry cell batteries with the solar electricity that will become the routine hallmark of the future for communities like Karagwe. All of Ambeeka's operations in Karagwe will be contracted out to CSEW. Mr. Gaspar Makale, founder and CEO of CSEW, will

serve as Ambeeka's Chief Operating Officer for this project. Mr. Makale will facilitate dealings with the Tanzanian government, as well as with Karadea, an influential UN-funded non-government organization that will be heavily utilized, both in the construction of the power station, and in ongoing operations. Scope of Operations CSEW will be responsible for conducting the following activities in Karagwe: ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ Operating and maintaining the power station and community center Placing supply orders and maintaining inventory Overseeing and orchestrating solar kit assembly and distribution Collecting customer payments Servicing customer repair calls and manufacturer's warranties Printing and distributing advertisements, such as billboards, posterboards, and brochures Subscribing new customers, and up-grading current and past customers Organizing informational forums and instructional demonstrations Ambeeka will negotiate the most attractive supply agreements possible, and all purchases will be made directly from manufacturers at wholesale prices. Additionally, all shipping will occur via ocean, to the Tanzanian port of Dar es Salaam. Supplies will be trucked overland to Karagwe from the Indian Ocean coast. To avoid import duties, all batteries will be purchased in bulk directly from the Chloride Exide Company, a Tanzania manufacturer. Lights, charge controllers, wiring, connectors, and radios will be purchased in bulk from wholesale suppliers in the United States, Europe, or South Africa. Solar modules will be purchased directly from GlobalSolar, Inc, a Denver, Colorado based company with production facilities in India. Wind turbines and towers will be purchased from and installed by Sagrillo Light & Power, of Forrestville, Wisconsin. Building and security materials will be purchased in the United States, South Africa, or Kenya. Ambeeka will be able to legally avoid all

import duties through Mr. Makale's association with Karadea, which enjoys complete exemption from most Tanzanian tariff laws. A temporary work force of about 100 will be hired in Karagwe to build the power station and community center. Sagrillo Light & Power will design, oversee, and orchestrate the construction project, with all Ambeeka officers present to oversee progress and to direct funding. 11 Ongoing Operations After the power station and community center are completed, a full-time workforce of three to five maintenance technicians and two to four security agents will be hired and paid directly by CSEW for salaries in excess of \$1,000 per year. Sagrillo Light & Power will thoroughly train CSEW technicians on proper maintenance and operation of the power station. Insurance on hard assets will be purchased from a trustworthy agency in Tanzania. CSEW will be charged with the responsibility of maintaining customer relations and satisfaction. This will include subscribing new customers and taking care of existing ones. CSEW will provide free maintenance or repair visits to customers' homes for one year after the equipment's initial installation. Additionally, CSEW will help and encourage customers to upgrade to larger power systems. Used components in good working condition will be accepted as tradein for credit on a larger system. Furthermore, customers will be encouraged to return their used batteries to CSEW, which will send them out for proper recycling. Price credits towards the purchase of new batteries will be given to all customers who dispose of their old batteries in this manner. CSEW will be in charge of hiring and maintaining a trained local workforce. Because Mr. Makale has taught at the Karadea Solar Training Facility for six years, he knows who the most competent technicians are, and how to find them in East Africa. Ambeeka will provide the financial resources to help Mr.

Makale attract these technicians to Karagwe. Operating Expenses Table 3 shows Ambeeka's anticipated operating expenses from 2001–2006. Table 3. Operating Expenses 2001 CSEW Contracting Fees Maintenance Expenses Marketing Expenses Insurance and Security Total 5, 000 3, 000 3, 000 8, 000 \$19,000 2002 10,000 3, 150 3, 600 8, 000 \$24,750 2003 20,000 3, 308 4, 320 8, 000 \$35, 628 2004 40, 000 3, 473 5, 184 8, 000 \$56, 657 2005 80, 000 3, 647 6, 221 8, 000 \$97, 867 2006 160, 000 3, 829 7, 465 8, 000 \$179, 294 12 Development Strategy Ambeeka will assemble a legal team and incorporate during the first quarter of 2000. After completing and revising the business plan, the company will begin to seek grants and investments from accredited private investors, multi-national relief agencies, and, possibly, from large corporations. There will be some need for product development and prototyping in Karagwe. Solar electric systems consist of four main components. The solar panel harnesses photon energy from the sun, converting radiation into electricity. This electricity is then conditioned by a charge controller before it is sent to a battery for storage. The charge controller regulates the battery's state of charge, preventing it from being damaged. The appliance, then, receives its power directly from the battery. This system has been used and perfected for well over fifty years, and Ambeeka's kits will not deviate from this simple design. 16 Nevertheless, Ambeeka's solar electric systems will be sold as pre-assembled kits. Because customers will be expected to perform their own installations, Ambeeka will need to test customer reaction to these kits. Specifically, Ambeeka will assemble several versions in order to develop a packaging method that optimizes simplicity for the customer. Prototype testing will be conducted simultaneously with the construction of the power station, and will take less

than one month to complete. Once in Karagwe, Ambeeka and CSEW will focus on developing market demand for the financing services. Because these financing plans will be expensive, and because no equipment will be distributed until all payments have been received, it will take time for Ambeeka to earn the trust of Karagwe's consumers. However, Ambeeka is convinced that this can be done within one year. First, utilization of CSEW, a Karagwe company that people already know and trust, will help to lend credibility to Ambeeka's promises. Second, the power station and community center will represent a symbol of Ambeeka's long-term commitment to the community. Finally, Ambeeka will lead by example; when working solar kits are delivered to the first wave of customers, Ambeeka's trustworthiness will be ultimately confirmed. By this time, Karagwe's demand for these systems will be growing fantastically. Development Timeline Project Karagwe will be launched in five major phases, during the following estimated dates: Phase 1 Incorporation: Finalize business plan, incorporate, file with the U. S. SEC, build project website: January-March, 2000 Phase 2 Venture Financing: \$1 million for construction of power station & community center, and to jumpstart operations: Februrary-September, 2000 Phase 3 Phase 4 Phase 5 Construction of power station & community center: October-December, 2000 Optimize solar kit packaging and assembly: November, 2000 Subscribe customers to solar kit financing plans: December, 2000 Development Expenses Ambeeka estimates that the company will need \$2,000 to \$5,000 for incorporation and legal fees, which will be paid by Mr. Spellberg during the first quarter of 2000. 16 Please see Appendix B for a schematic diagram of a solar electric system 13 Company Organization Ambeeka's principal founders, Jason Spellberg and Gaspar Makale, will control the majority of the

company's equity. Ambeeka will employ both Mr. Spellberg and Mr. Makale on a full-time basis. A Board of Directors will be assembled if and when investors demand one. A Board of Advisers has been compiled in the meanwhile. This Board is composed of experts with extensive experience relevant to the area of international rural development. All of these advisers have agreed to lend their assistance free of charge. Please see Appendix E for a detailed description of Ambeeka's Board of Advisers, and Appendix F for the resumes of Ambeeka's founders. Management Team Jason P. Spellberg, Executive Officer. Mr. Spellberg is Ambeeka's primary visionary. He will earn his MBA degree in Entrepreneurship from the University of Colorado at Boulder in May 2000. He has taken formal coursework in both PV and wind system design and installation at Solar Energy International (SEI) of Carbondale, Colorado, arguably the most respected and well-known RE training facility in the world. Mr. Spellberg has many contacts in the industry, and knows key people at the National Renewable Energy Laboratory (NREL), the Public Service Company of Colorado, GlobalSolar, Inc., Energy Alternatives Africa, and the Tanzania Investment Center. He has traveled extensively in East Africa, and conducted market research on solar financing in Karagwe while doing an internship for CSEW during the summer of 1999. Gaspar V. Makale, Africa Operations Officer. Mr. Makale, Ambeeka's principal co-founder, will serve as the company's Officer for Africa Operations. Mr. Makale is a native of Karagwe, Tanzania, and is a master electrician. In 1999, he founded the Columbia Solar Electronics Workshop (CSEW) with financial backing from Mr. Spellberg. CSEW offers a wide range of electrical services in the Karagwe area and beyond. Mr. Makale has installed over 500 solar electric systems in his career, and he has taught the PV systems design and

installation course at the Karadea Solar Training Facility for six years. For the last three of those years, Mr. Makale has served as the school's resident chief of staff. The school itself is located in Karagwe, and is operated and funded by one of Tanzania's most important NonGovernment Organizations, the Karagwe Development Association (KARADEA), with which Mr. Makale has very close ties. In a period of only eight years, the Karadea Solar Training Facility has arguably become the most respected solar energy technical school in the Southern Hemisphere. Mr. Makale has earned the distinction "Fundi, "which, in Kiswahili means "Master Technician. "He is unquestionably Tanzania's premier installer of PV systems, and one of the most admired men in Karagwe. Administrative Expenses Table 4 shows Ambeeka's expected administrative expenses for 2001–2006. Table 4. Administrative Expenses 2001 Salary, Mr. Spellberg Benefits, Mr. Spellberg Salary, Mr. Makale Travel Expenses Legal & Accounting Services Office Expenses Total 30, 000 3, 000 2, 500 4, 000 4, 000 500 \$44, 000 2002 36, 000 3, 600 3, 000 4, 800 4, 800 600 \$52, 800 2003 43, 200 4, 320 3, 600 5, 760 5, 760 720 \$63, 360 2004 51, 840 5, 184 4, 320 6, 912 6, 912 864 \$76, 032 2005 62, 208 6, 221 5, 184 8, 294 8, 294 1, 037 \$91, 238 2006 74, 650 7, 465 6, 221 9, 953 9, 953 1, 244 \$109, 486 14 Financial Assumptions The financial statements presented in Appendix G reflect only Ambeeka's forecasted sales of pre-financing contracts in Karagwe. Revenues generated from community center services are not included in these forecasts, nor are potential revenues generated from projects in locations other than Karagwe. In addition, the financial statements assume that Ambeeka makes no capital expenditures during the explicit period of 2001–2006. Due to the nature of the prefinancing plans, the bulk of customer payments will be collected

before kit components will be ordered. This will have a positive effect on net income and cash flow. Table 5 presents Ambeeka's expected operational calendar, and shows why reported net income and cash flow will be increased by the nature of the pre-financing plans. Table 5. Operational Calendar Year 0 Nov Dec Jan Feb Sign-Up New Customers Collect Monthly Payments Order Kit Components Assemble Kits Distribute Kits Charge off Cost of Kits Sold Mar Year 1 Apr May Jun Jul Aug Sep Oct Nov Dec Year 2 Jan Feb Financial Forecasts The following charts graphically illustrate Ambeeka's growing net income and cash flow balance from 2001-2006. \$800, 000 Net Income \$700, 000 \$600, 000 \$500, 000 \$400, 000 \$300, 000 \$200, 000 \$100, 000 \$0 (\$100, 000) 2001 2002 2003 2004 2005 2006 15 \$2, 700, 000 Cash \$2, 250, 000 \$1, 800, 000 \$1, 350, 000 \$900, 000 \$450, 000 \$0 2001 2002 2003 2004 2005 2006 Capital Requirements Ambeeka requires \$800, 000 in start-up capital for the construction of the power station and community center. An additional infusion of \$200, 000 in cash at the end of 2000 will be needed to jump-start operations; this includes a significant safety cushion in case of financial emergency. Ratio Analysis Table 6 shows Ambeeka's comparative financial ratios for operational years 2001–2006. The increasing return on equity figures demonstrate that Ambeeka does not plan to seek further external capital to expand the operation in Karagwe. The return on assets figures do not increase as substantially, because this analysis assumes that Ambeeka does not expend any cash during the first six years of operation. Table 6. Financial Ratios Profitability Cost of Kits Sold Operating Expenses Gross Margin Profit Margin Return on Equity Return on Assets Activity Total Asset Turnover Fixed Asset Turnover Liquidity Quick Ratio 2001 2002 2003 2004 2005 2006 0. 00% 74. 79% -74. 75% -74. 75% -

6. 30% -6. 36% 0. 09 0. 12 4. 19 19. 04% 30. 69% 14. 57% 8. 74% 2. 21% 1. 99% 0. 23 0. 39 2. 14 22. 84% 15. 67% 44. 97% 26. 98% 17. 05% 11. 18% 0. 41 1. 13 1. 53 28. 55% 10. 50% 51. 04% 30. 63% 38. 70% 16. 77% 0. 55 2. 63 1. 40 38. 07% 9. 98% 44. 63% 26. 78% 50. 76% 15. 87% 0. 59 4. 74 1. 46 38. 07% 10. 16% 45. 86% 27. 52% 78. 23% 17. 11% 0. 62 8. 88 1. 49 Ratio Comparisons. There are no comparable businesses that release their financial ratios to the public. Most of the activity in the rural development industry is driven and subsidized by industrialized governments and World Bank contracts. There are several private enterprises that have been largely successful in this realm, but their financial statements are not available for comparison. 16 Financial Risks17 Currency Translation. All of Ambeeka's revenues will be collected in Tanzanian shillings, and almost every shilling collected will have to be converted into U. S. dollars in order to meet the company's major expense accounts. Although the Tanzanian shilling has deflated considerably against the dollar over the past eighteen months, this trend may not continue. As far as the founders know, there are no marketbased instruments available for hedging this currency risk. As such, all financial forecasts assume that Ambeeka will lose 5% of its revenue to currency exchange fluctuations and expenses. In order to minimize exposure, almost all collected Tanzanian money will be immediately converted into U. S. dollars by establishing a corporate forex account at the Tanzania National Bank. This account will allow for currency exchange at a competitive market rate, and will also enable Ambeeka to automatically wire transfer all funds directly into a corporate account at either Citibank or the Chase Manhattan Bank in Denver. This will be Ambeeka's short-term answer to contending with currency risk. For the long-term, Ambeeka will neutralize

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currency risk by diversifying its operations and holdings into other areas of the world. Political and Economic Stability. The countries surrounding Tanzania's western border have experienced a great deal of strife over the past ten years, characterized by anarchy, exodus, bloody violence, and massive inflation. In Tanzania, these regional pressures have contributed to high unemployment and double-digit inflation. Nevertheless, Tanzania has demonstrated 38 years of political stability, during which time the government has transferred power peacefully on three different occasions, most recently in 1994. There is a substantial World Bank presence in Tanzania, as well as in Kenya and Uganda. The Tanzanian government has set up an Investment Center to aid foreigners in identifying lucrative opportunities in Tanzania. Consistent with this measure, the government has also adopted extremely liberal tax and import laws in an effort to attract foreign investment. Ambeeka is confident that the political and economic climate in Tanzania is becoming more and more favorable for business every day, and that real progress is being made to protect Tanzania's economy and infrastructure from the instability occurring in neighboring regions. Coffee. Karagwe residents depend heavily on coffee for their revenue. Economically, coffee harvests can be affected by climate or market prices, and this cannot be ignored as a potential threat to Ambeeka's success in Karagwe. However, Ambeeka's presence in Karagwe will drastically improve the region's prosperity, and the community center will help to spark an entrepreneurial spirit by providing new opportunities for small business in Karagwe. In short, Ambeeka's commitment for a long-term, value-enhancing presence in Karagwe will itself significantly neutralize this risk by helping the community to diversify and expand its economy. Furthermore, Ambeeka will

explore the possibility of accepting coffee as payment for solar kits, which might prove to be another effective strategy for neutralizing currency translation risk. Cross-Cultural. There is an operational risk inherent whenever a company in one country attempts to do business in another. This " distance" risk will be mitigated in Karagwe through the partnership with CSEW, which will handle all day-to-day operations of the business. Additionally, Ambeeka will maintain a full-time Colorado-based staff, as well as an expanding travel budget, so that Karagwe, and future sites in other countries, will be visited on a regular basis. Exit Strategy This proposed project in Karagwe will require a long-term commitment. In Karagwe, Ambeeka will generate cash flows that will be used to finance project expansions into other areas of the world, such as West Africa, Asia, and Latin America. Once Ambeeka's concept has been proven, and the potential for further growth demonstrated, Ambeeka will most likely exit via a management buy-out. Another real possibility will be to take the company public. Demonstration of substantial and sustainable growth, combined with the establishment of a global brand name recognition, should make this a viable exit option. In the past decade, several mutual funds have been established that explicitly invest with environmental companies, and this demonstrates that there is a public capital market willing to purchase equity in a company like Ambeeka. In any case, Ambeeka does not foresee an exit occurring until at least 2006. 17 For a comprehensive background on the challenges of conducting business in Tanzania, please see the author's paper entitled Tanzania: Developing Strategies for Effective Business Practices, available in Adobe Acrobat format from the Ambeeka website, www. Ambeeka. com 17 Investment Requirements Mr. Spellberg has already

invested \$8, 000 in administrative, travel, and research expenses to write this business plan. In the near future, Ambeeka will require an additional \$2, 000 to \$5, 000 for incorporation and legal expenses, plus \$1 million in seed venture financing to launch the project in Karagwe. Table 7 presents an itemized breakdown of the venture financing needed. Table 7. Itemization of Investment Needed Power Station 5, 000 Watt Solar Array 10, 000 Watt Wind Generator Power Conditioning Equipment Power Storage Equipment Security Equipment Wiring and Connectors Labor Total Cost of Power Station Community Center Coffee and Fruit Processors Refrigeration & Freezing Equipment Computing and Telecommunications Center Water Pumping Facility Convention Center and Theatre Battery Charging Station 2 Work Vans Workshops Office Space Furniture Security Equipment Labor Total Cost of Community Center Total Power Station Community Center Cash for Operations Total Venture Round B Investment 50, 000 50, 000 50, 000 50, 000 10, 000 10, 000 30, 000 \$250, 000 175, 000 80, 000 100, 000 60, 000 25, 000 20, 000 20, 000 15, 000 5, 000 5, 000 5, 000 40, 000 \$550, 000 250, 000 550, 000 200, 000 \$1, 000, 000 In addition, the company will seek assistance in further developing legal, distribution, marketing, and financial strategies for conducting business internationally. Therefore, Ambeeka will require significant strategic support, as well as capital, in launching this venture. Project Valuation Table 8 shows the valuation analysis for Ambeeka's project in Karagwe. This estimation is based on expected net income in 2006 multiplied by a factor of three. This multiple reflects Ambeeka's expectation that the services offered at the community center will be 75% of total net income. This valuation analysis unequivocally confirms Ambeeka's intention to provide a positive return to its investors.

This is consistent with the company's mission statement, which mandates that Ambeeka will profitably empower underprivileged communities through the application of RE. 18 Table 8. Net Income-Based Valuation Expected Revenue from Pre-Financing Program Expected Revenue from Community Center Total Expected Revenue Expected Profit Margin Expected Net Income P/E Multiple Expected Valuation Discount Rate Present Value, Year 2000 2006 \$2, 843, 100 \$8, 529, 300 \$11, 372, 400 27. 52% \$3, 129, 282 10 \$31, 292, 815 50% \$2, 243, 115 Offering Ambeeka's required \$1 million capital investment will be obtained through a venture round financing period conducted during first half of 2000. Ambeeka will attempt to obtain the majority of this capital either from an environmental project investment agency such E & Company, or in the form of a partnership with a large, multinational corporation interested in penetrating emerging markets. Ideally, this will be an electronics or telecommunications company that has substantial financial, marketing, and legal resources. Potential corporate partners include companies such as General Electric, Philips, Sharp, Magnavox, Toshiba, Thompson's of France, and a host of streamlined, globally-aggressive telecommunications companies. Ambeeka will also seek and accept financing from private, accredited investors such as business Angels, in accordance with all U. S. and Tanzanian securities laws. Ambeeka will prefer to structure this investment agreement as an exchange of services partnership agreement, but, if necessary, equity can and will be granted in return for capital. Because the founders want to maintain cash flows for use in future project expansions, and not to buy back common stock, Ambeeka will attempt to retain 67% of its equity in the control of management throughout both rounds of financing. Additionally, the company

will explore the possibility of leveraging a partnership or equity investment with a loan from a government or non-profit relief agency such as USAID or the Africa Project Development Fund. 18 The markets in which Ambeeka will operate have a tremendous long-term potential for economic development. Ambeeka has the knowledge and the local contacts to bring electricity and prosperity to these regions. Eventually, these markets will develop a substantial demand for electronics, telecommunication, and information technologies. Ambeeka's ideal investor and/or corporate partner will have the vision and the desire to penetrate these markets early and aggressively. They will have the resources to provide significant financial, logistical, operational, marketing, and legal support. In exchange, a partner company will be granted exclusive supply and branding rights for all products and services that Ambeeka offers. In addition, Ambeeka will actively help a partner company to market its product(s) at the grass roots level by employing locals to build a loyal, long-term customer base within their communities. By providing underdeveloped communities with affordable and dependable electricity, Ambeeka will help pave the way for prosperity and economic development to permeate emerging markets all over the world. 18 The financial statements in Appendix G assume that all capital raised is used to purchase equity 19 20 Karagwe 21 Simplified schematic diagram of a basic solar electric system, with arrows indicating direction of energy flow. Photovoltaic Module DC Load or Appliance Battery 22 GLOBAL ENTREPRENEURIAL RE ENTERPRISES Organization CAT Consultancy Cinergy Global Power E & Company Econergy International Corporation Energy & Environmental Ventures, LLC Energy Alternatives Africa Energy Power Resources, Ltd. Enersol Global Impressions, Ltd. Hyder Intermediate

Technology Consultants Nykomb Synergetics AB Plenum Energy PowerGen Ramboll Solar Bank International Soluz SunTree The Grameen Bank/Grameen Shakti TradeWind Insurance Type Profit Profit Profit Profit Profit Profit Profit Non-Profit Profit Non-Profit/Profit Profit Location Wales United Kingdom New Jersey, USA Colorado, USA New England, USA Kenya England New England, USA United Kingdom Wales United Kingdom Sweden Germany United States Denmark United States New England, USA Israel Bangladesh United States 23 During the Summer of 1999, Mr. Spellberg conducted an informal survey of Karagwe citizens. As an American, it is very difficult to obtain reliable information from people there, because they will always try to make themselves sound poorer than they really are, in the hope of receiving a handout or "sponsorship." Therefore, questions concentrated on qualitative measures rather than quantitative. In other words, discussion of actual dollar figures was avoided. Nevertheless, a good measure of Karagwe's demand for solar electricity, and why it is not being met, was obtained from these conversations. In some cases, a translator was used. The following questions were posed, generally in this order: 1) 2) 3) 4) 5) 6) 7) 8) 9) What other electrical appliances do you own? How do you feel about the currently ava