Executive Summary

:: The Opportunity ::

RE-Power Them uses local knowledge and resources, combined with low-cost, low technology decentralized renewable technologies, providing energy and potable water solutions for security energy supply security and disaster relief. By involving community leaders, engineers, regulators and implementers, we design solutions where utility services are non-existent or expensive due to shock events, e.g. earthquakes, climate change effects, financial, etc.—ultimately empowering communities to improve their quality of life and reduce greenhouse gas emissions. One of our designs involves hybrid PV-wind-battery-diesel systems for a telecommunications station with a 365/24/7, 1kWh/day demand for power currently met by diesel generators and transportation of diesel.

:: The Target Market ::

The customers: Government agencies, private companies and NGOs.
The problem: Governments require assistance with rapid implementation of hybrid renewable energy systems, which help them achieve immediate energy needs, as well as carbon reduction targets. Customers reside in communities requiring disaster relief and rebuilding where their livelihoods are currently powered predominantly by e.g. diesel generation or sub-par 'conventional' energy alternatives. We will also address potable water supplies that are seasonal and/or contaminated. A costing schema for a hybrid PV-wind-battery-diesel system for a telecommunications station with a 365/24/7, 1kWh/day demand, requiring security of energy supply follows:

Year	Initial Cost	Operating Cost ($/yr)	Total NPC ($)	COE ($/kWh)	Capacity Shortage (%)	Cost of Diesel ($/gal)	Hybrid RE Shipments ($/yr)	Annual Sales Consultancy
2010	53,700	1,219	66,714	17.122	0.0	3.217	107,400	150,000
2014	61,600	2,413	87,358	22,421	0.0	3.354	1,907,136	900,000

NB: Table inputs based on 3 kWh/m^2/d average annual solar, 9.84-22.9 ft/s wind speed. Cost of CO_2 estimated at $20/ton. Analysis performed with HOMER Micropower Optimization Model software. Marginal for wind turbine costs reflects cost savings involved with shipping, installing, etc. 20% was added to batteries and diesel generator initial cost to account for balance of systems (BOS) e.g. controllers, fuel tanks, wires, racks, etc. 8% real interest rate represents as typical commercial rate. System lifetime projection is 20-30 years. Price of diesel projected to increase 2.5%/year based on USA Energy Information Association (EIA) projection. No additional cost for transport to disaster areas is in included in the diesel price

The competition: It is uncertain if anyone is trying to invoke the holistic, long-term measures we propose. Our experience is that systems are installed disjointedly, without any looking for the end needs of the whole system. Objectives can be achieved by using alternatives away from the trodden path.
Regulatory: There may be some obstacles requiring circumvention, variances or concessions made for extracting knowledge and experience in neighborhoods we will serve. This may be required in order to invoke the preventative pain process we will propose, or for measures for repurposing the outcomes for the future needs in the communities served.

:: The Team ::

Kimberly L. King, Team Lead, Principal, Project Engineer: Former Principal of green jobs training non-profit GO! - Green Opps 501(c)(3) (pending). MSc Renewable Energy Engineering, CREST, Loughborough University, UK (expected June 2010). Ms. King is 100% committed to this endeavor. She would be available to commit to a full-time schedule.
Laurence Steijger. Principal, Lead Engineer: Lead Engineer at Silvercrest Energy and Automation. DocEng Renewable Energy Engineering from CREST, Loughborough University, UK (expected 2012). Mr. Steijger is 100% committed to this endeavor. He would be available to commit to a part-time schedule.

Agostinho Miguel Garcia, Chief of Development & Engineering: Chief of Development & Engineering, Sun Business Development providing product and solutions development in all renewable energy technologies, energy efficiency, sustainability. MSc Physics Engineering and Renewable Energy Instiuto Superior Tecnico, Lisbon, PT. Mr. Garcia is 100% committed to this endeavor. He would be available to commit to a part-time schedule.
Dr. Paul D. Hyden. Advisor: Background in theoretical and applied research in financial derivatives, semiconductor manufacturing, assisted reproductive technologies and service operations management. BS, MS, PhD Operations Research and Industrial Engineer, Cornell University. He would be available to commit to a part-time schedule.

:: Objectives ::

The offering: RE-Power Them stands as a model for immediate disaster relief, and as part of longer-term reconstruction efforts. As renewable energy system integrators and sustainability development experts, we provide knowledge and key components for energy and potable water systems to generate customized, durable, robust and revitalizing renewable energy and energy efficiency installations systems solutions that should explode in the coming years. Our approach allows for pragmatic renewable energy opportunities that are on parity economically with the current energy alternatives. Local teams will be developed, and local experience will be valued and utilized in assessing the best solutions for providing electricity, heating, cooking needs and improving water supply/quality—leveraging and reusing applicable experience from each project. We act an integrated unit/task force, on a project-by-project basis providing the best solution for the given challenge, depending on the local needs of the citizenry, geographical predisposition, resources and infrastructure. Our goal is to assess and understand the entire situation, in the short-term and long-term, providing a plan incorporating all actors on the ground, laying down a path for a sustainable reconstruction and future by working closely with, and more importantly, for the citizenry served.
Value Proposition: As consultants and systems integrators, the solutions we propose won't cost the Earth, and will provide a sustainable future to all citizens we engage. Financial institution participation would give our customers a clear advantage for addressing future shock events.
Competitive advantage: Our competitive advantage includes a strong engineering foundation, community outreach experience, awareness and a driving passion to execute real-world solutions. We bring an understanding about real-world scenarios from well-respected sustainability development and renewable energy technologies institutions. We have a long-term vision to build the intellectual capital to forge a virtuous circle between the communities that need and use energy, and between the engineers that build solutions. Ultimately, we will serve as an exacting standard service delivery machine of inexpensive, effective, easy-to-install hybrid renewable energy technologies and/or techniques.
Customer validation: NGO e.g. Solar Electric Light Fund (SELF.org). The Executive Director of the Solar Electric Light Fund has acknowledged our vision, and strongly agrees that what we propose is rich in merit and is a most worthwhile and needed pursuit.

:: Strategies [Go-to-Market Strategy (Feasibility)] ::

Development status: Establish contacts with stakeholders. Establish a reputation to build trust relationships and partnerships, provide knowledge-base transfer and hand-off deliverables to NGOs, renewable energy companies, utilities, local construction companies, local engineering companies, schools, universities and government authorities. Demonstrate successes from previous projects and installations. Develop partnerships and improve branding identity and value for collaborators/partners whose equipment is utilized. Obtain a 'Good Housing-keeping' seal of renewable energy systems integrators.
Strategic partners: Local communities, state and local governments, private businesses, NGOs.
Distribution: Distribution via web, email announcements, participation at conventions, seminars, word of mouth.

:: Sustainability ::

Product: We empower the clients by assisting them in the deployment of new, low-cost renewable energy systems technologies. We also provide them with training and education on how to manage renewable energy and energy efficiency systems for maximum carbon footprint reduction.
Process: We will develop and refine an active prototyping menu of services in the field where services are lacking or inexpensive due to shock events. This will include opportunities for manufacturing, as well as green jobs creation. Sensitivity and care will be taken in the utilization of local material and financial resources in an effort to satisfy the needs and wishes of the communities served. This approach, in conjunction with local culture and practices, is to ensure that projects will be technically, financially, environmentally and organizationally sustainable—minimizing impacts to the Earth while improving the recipients' quality of life. The knowledge-base transfer will include opportunities for adaptation through education and training, early on in the process, to reduce vulnerabilities and mitigation of impacts via conservation measures and implementation of energy efficient renewable energy system technologies. This includes communities that have yet to contribute to increases in carbon-based lifestyle greenhouse gas (GHG) emissions—'teaching them proactively' preventative mechanism to be better global citizens. Ultimately empowering clients, in the present and future, to create net positive financial and social and environmental impact.
Pitch: RE-Power Them uses local knowledge and resources, combined with the latest low-cost, low technology decentralized renewable technologies to provide energy and potable water solutions for a rebuilding a holistic, sustainable future. Our efforts and services will be provided on-site to communities where services are lacking or inexpensive due to shock events e.g. earthquakes, climate change affects, financial, ecological, etc.—ultimately returning this knowledge back to these communities. Our aim is to partner with local citizenry, community organizations, governments, NGOs and private institutions.

:: Financials and Funding Required ::

Key-drivers: On a day-to-day basis, we will proactively serve customers with customized, preventative emergency preparedness protocols and procedures. When there is a shock event commanding our services and expertise, this should expedite our timeline to profitability.
5-Year Financial Summary: To date, no outside funding has been received. Outside personal investments/savings and loans were taken out toward scholastic endeavors for garnering institutional credibility and experience. Utilizing charitable giving is expected at the early stages to achieve the first year milestone e.g. using Kickstarter.com. We expect to license knowledge, consider franchising our schema, use learning experience from institutional knowledge brand, ultimately attracting others who will enable RE-Power Them to achieve its financial milestones. The following summary does not take into account unpredictable, unforeseen shock-events:

Income Summary	2010	2011	2012	2013	2014
Projects	2	6	12	18	24
Total Revenue	123,400	468,903	1,029,930	1,646,550	2,335,680
Gross Margin (%)	12.96	28.76	32.83	34.82	36.70
Operating Expenses	284,600	650,050	1,172,300	1,768,525	1,573,175
Net Income	-161,200	-181,147	-142,370	-121,975	+762,505
Headcount	2	4	6	8	10

Needs: Substantial support required for web & marketing presence, computer software and hardware. Three to six month below market salaries (prior to profitability), travel and accommodation budget to service sites, and to networking conferences. Investment will be required for us to implement services, carbon-free economy and jobs creation recommendations to improve the GDP of communities served.
Exit strategy: RE-Power Them aspires to be the benchmark in this sustainable systems integration design offering. The real paybacks occur when the shocks appear. The recipients of our services will own the project and operate its system through a local organization and government. A funder can expect to receive a return on their investment within 5-7 years.