Solera Power Corporation

Application

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Business Case

Technology base:	Mid-temperature solar thermal electricity generation
Funding Stage:	First Round
Business and Business Model	Manufacture some components, acquire others from other manufacturers and sell integrated sets ready to be installed.
1. Inception:	Incorporated in North Carolina in May 2007
2. Value Proposition What is the company's key value proposition (e.g. low cost producer, highest reliability)?	Preliminary calculations show that Solera's mid temperature systems would be able to generate electricity continuously (24/7 - some 300+ days a year) at about half the cost of a similar sized PV panel array that can only operate during the day and that the generation costs are competitive with tariffs at the distribution level in California.
3. Current Structure	Regular corporation with one single owner.
4. General Description: The description of your business. Describe how your business makes money and how will it assure great & long term profits for the future.	Use a demonstration unit as an instrument of sale and direct marketing efforts to selling to public utilities. Repeated sales to them will give a seal of approval, stating the product is a viable and economic solution. Innovators can not propel the product across the valley of death. Early adopters convince peers and expand the markets.
Product	
1. Product:	Mid temperature, small generating systems (25-50 kw), consisting of fixed, linear concentrating solar collectors, an organic Rankine engine, a cooling tower and a novel form of energy storage as pressurized hot water. Storage allows operation as a peaking plant. Estimated selling price of a 50 kw unit is $0.9 million.
2. Function and Benefit: Define and quantify key benefits to customers (cost/technical/etc)	Three stumbling blocks have hindered wider acceptance of renewable energy: cost, intermittency and lack of functionality. Solera's efforts are directed to finding ways of generating electricity continuously (24/7) at reasonable costs. Simpler, mid temperature system compensate the lower efficiencies with lower investment and maintenance cost.
3. Development Stage: Where is the product in its evolution (e.g. fully tested prototype; in initial production and markets; etc.).	Technology is well known and proven at higher temperature on large scale installations. Risk is downsizing economically existing technology. Output subject to daily and seasonal fluctuations of solar irradiation. A full scale demonstration unit is needed to rate the system and substantiate economics. Output of a prototype is not scalable.
Competitive Position	
1. Competitors: Who is your competition?	As a service, main competitors are the power grid providing an excellent service at reasonable costs and inertia to change. As a product, main competitors are PV panels that are scalable, have no moving parts but are only diurnal. PV panels are a mature technology backed by strong companies.

2. Edge over competition: What makes you better than other firms out there?	Better and less expensive product. Better because it can produce energy when desired and not only when the sun shines. Less expensive because it produces more energy per dollar invested.
3. Sustainability: Is this competitive position sustainable?	No. Will have three – five years lead time before appearing in the competition's radar. By then there will be patents and trade secrets to offer some protection, but the technology is well known.
4. IP Protection: How will you protect your proprietary information?	Initial patent applied for integration and novel use. First in market will acquire strong IP protection for a multitude of problems to be solved. Those patents, still to be written, are the ones that will provide a real barrier. Two patents under development.
Markets	
1. Target Market: What markets and market segments are you going after? How big is this market and how can you sustainably capture it?	Mid size market segment. Ideal size for small communities or green buildings competing with power grid at the distribution tariff level which provides a transformational base for distributed energy. With seal of approval from respected customer, product has the potential of attracting investors to sell electricity to above mentioned segments or as peaking plant. Distributed energy market could be huge.
2. Barriers to Entry: What are the key market barriers that will lend to your success?	Product is expensive and market perceived as small. Solera's lead time to decrease proportionally to success. Competition will face same obstacle of lack of turbines. Strategic alliance with a solid turbine manufacturer would offer some protection.
Customers	
Customers are the key to strong profits. Who are the specific customers that you are pursuing or will pursue?	Initially Solera would have to sell turnkey systems, but will evolve into pure equipment sales, installed by third parties. Solera expect to start with innovators (green buildings or real estate developers) but with a seal of approval from early adopters in public utilities, will target sales to investors selling them business opportunities to sell green electricity to the green buildings or small communities. Public utilities would invest to protect their market and sell distributed electricity.
Do you have any letters of intent to purchase?	Currently seeking two from wine makers in California
Company	
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