



Silichem, LLC

Company Overview: Silichem, LLC has developed a new process to manufacture ultrapure silicon wafers. By using the unique Silichem process, a major manufacturer of silicon will be able to combine the work of three plants into one site, saving over \$1 billion per year. The process will enable silicon to be made with zero carbon emissions (a first for the industry), saleable byproducts (gypsum and fluoride salts), and sufficient raw material availability. Incorporation of the Silichem process will enable an industrial player to dominate the \$11 billion silicon industry within a few years.

Problem: The intense growth of the solar energy industry is hampered by rising wafer prices, shortages of wafers and few suppliers at the beginning of the value chain. Every producer also has a carbon footprint.

Solution: Silichem's patent-pending process takes in sulfur and fluorspar tailings and produces high-quality, drop-in replacement silicon wafers at near zero cost, creating the potential to significantly lower wafer prices to the point that existing competitors will be forced to produce at a loss in order to retain market share. If a leading manufacturer were to switch to Silichem's patent-pending process, it would save more than \$1 billion per year.

Business Model: Silichem's technology supports a straightforward make-and-sell model. In addition to the silicon wafers manufactured, Silichem's process also provides byproduct streams including gypsum and fluoride salts, which are worth an additional \$16 for every \$100 worth of silicon produced. Silichem's goal is to be acquired before large scale operations are needed.

Market Opportunity: Silichem's proprietary technology will impact the \$11 billion market for solar/electronics grade silicon. This market is growing at an annual growth rate of approximately 25 percent. This represents an output globally of 125,000 tons annually. Five manufacturers currently dominate this market: Hemlock (Dow Corning), Wacker, REC, OCI, and MEMC. By 2020, most of the world's silicon will go toward manufacturing photovoltaic cells.

Competitive Advantage: Silichem has a patent-pending, vertically integrated process that is less complex and expensive than any of the three capital-intensive industry steps it replaces. The process offers higher purity silicon, less energy consumption and zero carbon.

Management Team: Matt Channon, founder and CTO, has 15 years of experience in the solar industry and holds an M.S. from the Georgia Institute of Technology. He founded and managed cSol Corp, a solar panel manufacturing firm, from 2003-2007. Sean Scott, COO, earned a B.S. from the United States Military Academy and contributes a strong background in marketing and entrepreneurship.

Exit: In 2013 Silichem expects to be acquired by an industrial player such as Applied Materials for \$1 billion.

Funding Request: \$1.5 million for development of pilot manufacturing facility to demonstrate Silichem's patent-pending process.



MATT CHANNON

Investors: Founder
Year Founded: 2011
Employees: 2

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In Attendance:
 Matt Channon, founder/
 CTO
 Sean Scott, COO

Revenue Forecast:
 2011: \$ 0
 2012: \$ 3M
 2013: \$ 7.5M