Aspen Aerogels is an energy technology company that designs, develops and manufactures innovative, high-performance aerogel insulation used primarily in large-scale energy infrastructure facilities. The company won its first SBIR award in 2001, its first year in business. Since 2001, the company has grown from an 8 employee operation with $2 million in revenue to a 250 employee operation with well over $100 million in annual commercial revenue.

Aspen Aerogels became a public company in 2014, raising $75 million for future expansion and investment in its business. Over the last 10 years, Aspen has developed a thriving commercial business primarily supplying thermal insulation into challenging industrial environments from cryogenic temperatures to 650°C. The commercialization of technologies developed in part under the SBIR program is essential to reaching a growing, cash flow positive business.

The SBIR funding Aspen Aerogels received was extremely valuable in leveraging existing working capital and in providing early revenue for the company. This funding supported the development of products that were considered innovative and fit for purpose by exacting customers. The funding allowed Aspen to leverage its investments in developing strong business support functions in sales and marketing, finance, and manufacturing. In turn, this allowed the company to establish itself and survive the very difficult times encountered in commercializing a new technology. Aspen Aerogels’ highly efficient insulation products are used across a very large range of temperatures in industrial, commercial and residential applications. Its products provide two to five times the thermal performance of widely used traditional insulation in a thin, easy-to-use and durable blanket form.

“Our end-use customers select our products where thermal performance is critical,” explains Dr. George Gould, VP of Research & Development. “The goal is to save money, reduce energy use, preserve operating assets and protect workers.” Aspen introduced two new key product lines, Pyrogel and Cryogel, in 2008 and has sold more than $350 million of its products globally, representing an installed base of more than 150 million square feet of insulation.
The company’s products are used by leading global companies in key energy market segments including Refining, Petrochemical, LNG, Power, and Subsea. Additionally, Aspen Aerogels sells its innovative insulation products into military and private aerospace applications, building and construction, transportation, apparel and OEM markets. Aspen has incorporated the impressive materials properties of silica aerogels into a flexible, easy to use blanket form that can be installed like many insulation products in use today.

“Of particular importance, our products reduce the incidence of corrosion under insulation, which is a significant maintenance cost and safety issue in energy infrastructure facilities. Our products also offer strong fire protection, which is a critical performance requirement in our markets. Although competing insulation materials may have one or more comparable attributes, we believe that no single insulation material currently available offers all of the properties of our aerogel insulation,” said Dr. Gould.

The company and employees support many programs and organizations that have lasting and positive impacts on the quality of life in East Providence, RI and Northborough, MA. For example, Aspen sponsors $2,000 in annual technology scholarships given to graduating students at East Providence High School that show the highest aptitude in STEM subjects. Aspen also provides monetary or technology equipment support to the local Boys and Girls Clubs in East Providence, RI and Northborough, MA. Nearly half of the research and development team in Aspen Aerogels is represented by woman. Aspen has worked extensively on a number of significant R&D programs with local universities including Tufts University and MIT in which students have been supported. Aspen has also worked with other universities across the U.S. on R&D projects.

“Our long term goals include increasing shareholder value by diversifying our product offerings to reach new customers and markets,” adds Gould. “We are aiming to be the most innovative manufacturer and successful supplier of nanoporous aerogel products in the world’s insulation markets.” Most of the company’s employees live in either Massachusetts or Rhode Island and in turn, those employees contribute to the success of the local economies in those regions. Aspen procures raw materials from all over the world, but has made considerable effort to develop local suppliers as well for some key raw materials, for logistics, and business support. During the company’s history, Aspen Aerogels estimates it has generated at least $500M of direct economic investment within the United States and much more indirect impact as those dollars are reinvested in businesses up and down the business value chain.