

# Firms born from UA patents called key

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FAYETTEVILLE — Five employees hunched behind desks at an office in the Arkansas Research and Technology Park in Fayetteville to finish paperwork for a grant proposal to help their new company keep operating.

“It’s all up to us to make it happen,” said Douglas Hutchings, chief executive officer of Silicon Solar Solutions.

The company has landed some \$400,000 in grants and attracted private investment but is not yet profitable. Hutchings projects the company will be in the black in 2012, he said.

Silicon Solar Solutions licensed a patent from the University of Arkansas at Fayetteville for solar technology that costs 30 percent less and does not use hazardous material like some other solar panels, Hutchings said. The company is working to refine the product, market it and identify manufacturers who are interested in using it with their own production facilities, Hutchings said.

“Can we convince someone to put in both the time and the money to get it to the marketplace?” Hutchings asked. “Having the best technology doesn’t mean you’re going to win.”

Hutchings’ company is among three formed early last year that use research patented by UA researchers. Silicon Solar Solutions created five fulltime, high-wage jobs last year, despite the worst recession in decades, Hutchings said. The business partners have also considered manufacturing their product in Northwest Arkansas, which would mean more jobs locally to make an environmentally friendly product, he said.

Technology-driven startups like Silicon Solar Solutions are key to creating high-wage jobs in Arkansas and keeping highly educated workers in the state, said Lisa Childs, patent attorney for UA. Her office evaluates technology for commercialization, then works with classes in the Sam M. Walton College of Business, state and local governments, and prospective businesses to match the UA patents with businesses that can take the technology to market.

While working on a business plan for his degree at UA, Hutchings originally thought he’d build a business around fitness. He changed his mind when he learned about the UA solar technology in one of his classes. Silicon Solar Solutions bought licenses for about six UA patents originally but plans to add more and file for three international patents, he said.

UA officials aren’t alone in thinking research-based patents are a key to improving the state’s economy, and UA’s contribution is critical, said Jerry Adams, president of the Arkansas Research Alliance, a public-private partnership that started in 2008. The alliance identified research areas such as nanotechnology where Arkansas has a chance to develop technology-based jobs quickly.

Last year, the alliance recruited two researchers to Arkansas — including one to UA — whose research it believes may lead to jobs in Arkansas, Adams said.

Universities nationwide made the link between research that leads to commercialization and a strong economy in the 1980s after federal laws loosened restrictions on universities’ ability to patent research, but the state of Arkansas didn’t follow suit until the beginning of this decade, Adams said.

Between 1976 and 1986, inventors within the University of Arkansas System disclosed fewer than 10 inventions. In the past decade, researchers disclosed more than 650 inventions, according to a November report by the UA Technology Transfer Office. Childs presented the report to the UA System board of trustees last fall.

Childs said the UA System owns 10 times more patents than any other Arkansas entity and plays a key role in Arkansas' "knowledge economy."

Since 2005, about 21 companies, mostly in Arkansas, have licensed dozens of patents based on research from UA-Fayetteville, according to a list provided by its Office of University Relations. Last year, Childs' office negotiated seven licenses, including six for startups and only one was for an out-of-state business, according to the report.

As of last year, Childs knew of 29 companies originally based on UA-generated technology, including five that were out-of-state businesses. Most of the businesses stay in Arkansas, providing high-tech jobs for UA graduates, she said.

Startups that use research from throughout the UA System employ about 700 people in high-wage jobs and generate more than \$36 million a year in in-state wages, Childs' report said.

The Fayetteville campus and its researchers benefit directly from the patents, as well. The campus and UA Agriculture Division generate about \$1 million annually from patents licensed to businesses. The Agriculture Division, a separate entity within the UA System, generates 87 percent of the patent revenue that goes into the Fayetteville campus budget.