

Silicon Valley Tries Going Solar

Semiconductor makers are flocking to the booming sun-power industry — and trying to improve it.

By Bob Keefe

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SAN JOSE, CALIF.) Semiconductor companies, which made computers and other elect devices ubiquitous, now are setting their sights on solar power.

In the past few months, many major companies in the semi conductor business have joined a rush into the solar industry, paving the way for what industry observers predict will be cheaper, better and more efficient equipment for both consumers and businesses.

Semiconductor companies think they can bring the type of precision technology and manufacturing techniques they perfected with computer chips to solar cells both those based on silicon and other types.

“Right now these are fairly dumb, passive electronics,” said Ralf Muenster, strategic market development director for National Semiconductor Corp., which in late June introduced its first solar product, a device it says makes solar cells work better in the shade.

Muenster said that’s just the start. “We have a whole vision of making these arrays smarter,”he said. “There’s a lot more to come.”

Last week, the venture capital arm of the biggest semiconductor company, Intel Corp., announced it was plunking \$38 million into a German solar company, just weeks after Intel announced it was spinning off its own solar business. IBM Corp. has jumped into the business too, partnering with a Japanese company to develop new solar technologies.

Even Hewlett-Packard Co., which doesn’t make semiconductors but has done extensive research in the area, recently li censed its transparent transistor technology to a Silicon Valley company that promises it can make solar panels twice as efficient and half as expensive.

Equipment makers are get ting in the game too. Earlier this year, semiconductor equipment maker Tokyo Electron Ltd., which has its U.S. head quarters in Austin, Texas, teamed up with Sharp Corp. to start developing new tools for solar cell manufacturing.

Last week, Tokyo Electron’s archrival, Applied Materials Inc., broke ground on a \$60 mil lion-plus factory in Singapore that will expand its capacity to make both solar and semiconductor equipment. Applied, based in Santa Clara, California, also has major operations in Austin.

“The timing is right” for the solar business, Mark Pinto, Applied’s chief technology officer, said in an interview in April.

That’s not just because oil and gas prices are soaring and the world is going greener. Solar technology, Pinto and others said, is now ripe for the kind of innovation and production know-how that high-tech companies can offer.

Making semiconductors and making solar cells — at least crystalline silicon cells, the most common type — is similar. Both are based on silicon and integrated circuits and require giant pieces of specialized machinery to manufacture.

Meanwhile, the solar industry is projected to grow much more quickly than the computer chip business.