

Alloy Silicon Plant Teams Up With Energy Recycler

By CATHY BONNSTETTER

For The State Journal

Recycled Energy Development LLC has contracted with **West Virginia Alloys**, a silicon manufacturer in Alloy, to capture heat exhaust from the plant and recycle it into electricity, an environmentally friendly process that will garner the company a percentage of the energy it needs at a cheaper price.

RED President and Chief Executive Officer **Sean Casten** said a modern, Clean Air Act-compliant coal plant costs about \$3,000 per kilowatt to build. By way of comparison, the plant in Alloy will cost about \$1,000 per kilowatt and will have lower operating costs because it won't need any fuel.

"We put the generation at the load, and that is much cheaper than any generation source," he said.

The West Virginia Alloys venture will cost RED between \$45 million and \$55 million. RED plans to recoup its initial costs and make a profit.

Although this technology can be piggybacked on an existing power plant to make it more efficient, according to **West Virginia University Institute of Technology** Provost and former utility executive **Charles Bayless**, a government-regulated utility must return any operating savings back to consumers — an arrangement Casten said effectively removes any incentive for cost control. While it was an efficient way to electrify the country, he said, it is now outdated and inefficient.

"The way this system makes money is by building expensive capital projects, not by saving money," he said.

West Virginia native **Arden Sims**

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— **Arden Sims, CEO, Globe Specialty Metals Inc.**

is the chief executive officer of **Globe Specialty Metals Inc.**, the corporation that owns West Virginia Alloys. Sims said that making silicon devours a lot of electricity: The plant's electric bill is 40 percent of its operating costs.

Recycling the energy will supply the plant with about one-third of its electricity needs. The savings will enable West Virginia Alloys to add 20 new jobs and increase production, according to the **Industries of the Future-West Virginia** March newsletter.

Globe Specialty Metals purchased West Virginia Alloys in 2005.

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RED, which operates out of Westmont, Ill., is only a year old, but its managers have implemented 250 projects like this during the past 30 years.

West Virginia Alloys should be recycling in two years.

"We are giving West Virginia Alloys

a fixed price for the next 25 years, which is cheaper than they would otherwise pay for power," Casten said. "They have just locked in a price in a world where the price of energy continues to go up."

Casten said he sees a lot of opportunity in West Virginia.

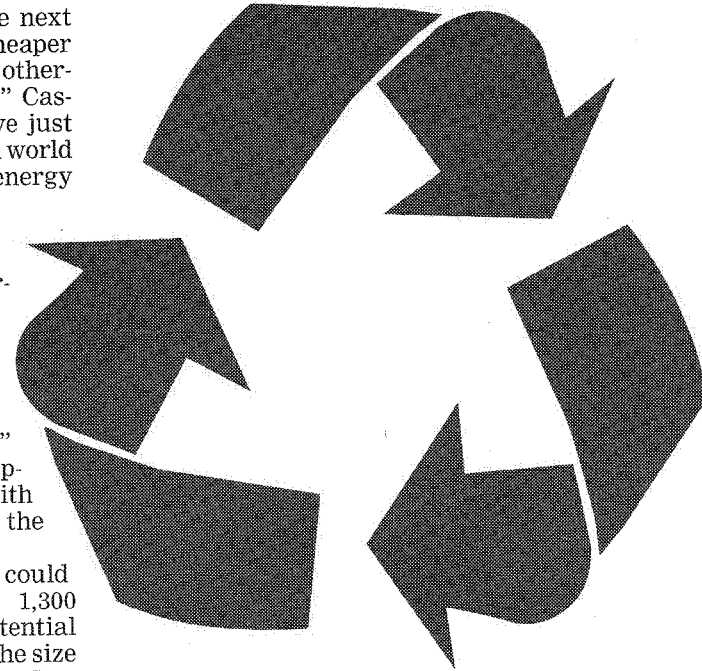
"The big opportunities are in places where you have big, energy-intensive industrials," he said. "Massive opportunities exist with the industrials in the Kanawha Valley."

RED estimates it could recapture about 1,300 megawatts of potential power in the state, the size of a large power plant. Casten said he thinks that although that is a considerable amount of energy it still is a conservative estimate. Nationally, he said, recycled energy could produce 20 percent of the country's electricity, reduce energy costs and lower total carbon dioxide emissions by 20 percent.

"It's economically irresponsible not to do this," he said.

To encourage energy recycling, some states are considering a Clean Energy Standard Offer (CESO) program.

"If a company can produce environmentally clean energy at 80 percent of



the future price they could qualify for a 20-year contract to sell the power at that discounted rate," explained **Carl Irwin**, Industries of the Future-West Virginia co-director.

For West Virginia to initiate such a program would require the involvement of the state **Public Service Commission**, utility companies and state government.

"This is a potential thing; discussions are ongoing," Irwin said. "It's also the best thing that has happened for West Virginia efficiency — ever."