INNOVATIONEWS

Novinda Corp. cleans coal power plant emissions, sees huge global marketing opportunity.

12 Aug 2014

ADA Technologies, Amended Silicates HgX, CH2M Hill, Denver, Ed Williams, Novinda Corp.

By Steve Porter
InnovatioNews

DENVER – While many environmentalists would like to see coal removed from the U.S. energy supply, the fact remains that more than 30 percent of the nation's electricity comes from coal-fired power plants.

Denver-based Novinda Corp., with its patented non-carbon mercury removal product – Amended Silicates HgX (AS-HgX) – is in the vanguard of companies helping to make coal plant emissions cleaner and safer. Novinda's technology was developed in the early 2000s, when scientists at ADA Technologies received EPA funding to develop a product for mercury emission control while preserving waste fly ash to use as a Portland cement replacement. Chemical process engineers from Denver-based CH2M Hill joined the team, and by 2009 the company – Amended Silicates — received initial venture capital financing to support product development and field testing.

That was the same year the company changed its name to Novinda Corporation. Two years later, Ed Williams, a veteran technology executive, became Novinda's CEO.

Ed Williams

Williams said Novinda's AS-HgX – which was named last month as one of the Top 100 technology products of the year by *R&D Magazine* – is the best alternative on the market to help utilities clean up their mercury emissions as required by the EPA.

"It's better for a couple of reasons," said Williams. "First and foremost, it changes mercury back into its original state, and therefore has less propensity to leach into soil or get into water. It becomes inert."

Williams said AS-HgX also has another huge advantage.

"The one other component to our process that is of substance is we do not damage the fly ash, so it can be sold for concrete and gypsum products," he said. "Our approach allows (coal) plants to recycle fly ash and not send it to the landfill, and allows them to sell it to concrete and gypsum companies.

"All of that translates into a better economic performance."

Williams notes that Novinda has the only non-carbon mercury removal product on the market for utilities, which must meet strict EPA mercury emission control standards by April 15, 2015 or face pollution fines.

The Black Hills Power plant In Gillette, Wyo. has been using Novinda's mercury capture technology since September 2012.

Williams said Novinda has been issued three U.S. patents, has six provisional patents and has filed 10 more patent applications for its technology.

"We have a very robust R&D team," he said. "It really speaks to the innovation behind the product."

Novinda has tested AS-HgX at more than 55 coal-fired power plants. Williams said five utilities are under contract so far.

But the future market opportunity is huge, drawing in millions in investor funds.

“It’s a tremendous market opportunity for us,” he said, noting an estimated $700-$800 million market in the U.S. alone. There’s also a big market internationally, with Europe estimated at about half of the U.S. demand and China at $2.4 billion.

However, Williams notes that Europe and China are not bound by the same strict regulations as U.S. utilities, and those markets will unfold more gradually over coming years.

Still, the U.S. market holds huge potential demand for Novinda’s AS-HgX for decades to come.

“We see the (coal) future similar to the EPA,” Williams said. “In the next 30 years, about 30 percent of the country’s power mix – it’s 37 percent today — will come from coal.

“It would be pretty disruptive to the infrastructure to just unplug (coal) tomorrow. So if it’s essential to our power economy, why not clean it up along the way?”

Novinda uses bentonite clay as its primary raw material for AS-HgX and contracts with Mineral Technologies Inc. to manufacture the product in their Wyoming-based plant

Williams said he’s glad to be leading a company that’s making a difference in cleaning up the nation’s environment.

“If we can help reduce (mercury) emissions, eliminate the need to send ash to the landfill and put these products back into use, that’s huge environmentally,” he said.