

## The County is reviewing a proposal to change trash into recyclable material. But the plan hasn't come without voices of caution

By Michael Sullivan

Although intrigued by the prospect of converting trash into energy at the Cochise County landfill, county officials are taking a go-slow approach to a proposal presented to representatives of local government on Nov. 9 by Global Energy Resources LLC.

The 6-month-old company, based in Pacific Palisades, Calif., is proposing to spend millions of investors' dollars to build a plant at the landfill.

Using an intense heating process for converting virtually everything now being buried there into energy, clean water and a solid, recyclable material, the plant would purportedly release no hazardous emissions.

Board of Supervisors Chairman Pat Call and Facilities Director L.H. Hamilton find the concept fascinating but are not leaping on the plasma gasification bandwagon just yet.

District 2 Supervisor Paul Newman is downright suspicious.

In an interview last week, Call recalled thinking during the Nov. 9 presentation by Global Energy Resources President John D. Cummings that the proposal sounded "too good to be true." Although wary, Call said the county has nothing to lose at this point. The burden of proof is on Global Energy Resources.

Hamilton is of the same mind.

"The bottom line here is that people have to understand that this has to be permitted from the get-go," Hamilton said on Wednesday.

Before anything is built, the plasma gasification process would need to be approved by the Arizona Department of Environmental Quality.

"We're not scientists here. As long as they (GER) can meet those requirements, they have assumed all the risk," Hamilton said.

Newman is uneasy about the entire process, saying that meetings were held by Call and Hamilton with representatives for GER and General Electric that he was not advised of in advance.

"That's rather unusual," he said Wednesday.

"The technology is intriguing, but I don't think the answers regarding emissions satisfied me," Newman added.

### The proposal

A plasma-arc process would be used in combination with "pyrolysis" to reduce virtually everything now being buried in the county landfill - including refrigerators and car batteries - to a recyclable, glassy material.

Pyrolysis is chemical decomposition brought about by using very high heat in the absence of air.

The glass can be used as roadfill or by the abrasives industry, Cummings said. The bulk of the trash would be converted to "syn" gas and ethanol and also could be used to generate electricity. Whatever liquid is contained in the trash would be converted to clean water and recharged into the aquifer, he said.

The technology is already being used around the world, Cummings noted dur-

ing the work session of the supervisors and local government officials.

The only material not acceptable is radioactive waste.

Cummings described plasma as "an intense energy force" consisting of an ionized gas source that, "when subjected to the proper combination of conditions, becomes an electrical conductor generating extremely intense energy, such as lightning."

"This is not a burner," he said. "We're not incinerating trash."

The only emissions from the process would come from the Jenbacher engine that runs the gasification operation, said Paul McGuire of GE. McGuire appeared with Cummings at the work session.

During the session, McGuire showed photos of plants located in Gussing, Austria; Harboore, Denmark; Chiba, Japan; Profusa, Spain; and Italy that are using this technology. More than 900 Jenbacher engines are in use at landfills worldwide, McGuire said. None, however, are located in the United States.

Confirmation of those plants can be found on the World Wide Web, but no emissions information was available.

The proposal is that a \$25 million, 2,000-square-foot plant would be built by GER at the county's 240-acre landfill, at no cost to the county. The company asked that the county arrange for a 20-year "feedstock" supply contract to include 100,000 tons of municipal solid waste and 100,000 waste tires per year.

Cummings said the time from the start of the process to beginning of operations would be about 18 months.

Intergovernmental agreements between the municipalities and the county for the landfill will expire in 2007, so the agreements will have to be extended, Call told the audience at the work session.

Each municipality could extract whatever recyclable materials they choose, such as paper and aluminum, before sending the refuse to the plant, Hamilton said.

The county now sends about 78,000 tons of refuse per year to the landfill, which has increased by 5,000 tons during the past three years, Hamilton said.

The process would not only accept new trash but could "mine" the trash already buried, Hamilton said.

All local units of government that are now paying a "tipping fee" of \$41.50 per ton to have their trash buried at the landfill, would see at least a \$10-per-ton reduction, Hamilton said.

The next step, if local government officials wish to pursue the proposal, is a letter of intent or memo of understanding, leading to a contract. This will enable the company to start the engineering process. This is where the matter now stands.

Wait a minute

Newman is in no hurry to proceed.

"I think we should be very cautious about entering into a multi-year contract," he said. "I don't think they're telling us everything we need to know."

One of Newman's concerns was a news report that GER's chief executive officer, Armen Kazanchian, was charged with fraud in California. A medical doctor, Kazanchian was one of seven people charged in 2003 by the state Attorney General's Office with defrauding Medi-Cal, plus identify theft and money laundering.

Hamilton said he was aware of the situation three weeks ago and checked it out. All charges were dropped on July 16, according to court records provided to the Herald/Review.

An "overzealous prosecutor charged everybody," Hamilton said. The court records cited "insufficiency of the evidence granted."

Whether or not the charges were dismissed, Newman said he should have been apprised of the matter.

"I want to know more about these people's backgrounds," Newman said.

Environmental organizations also are urging caution.

Daniel R. Patterson, with the Center for Biological Diversity in Tucson, wrote County Administrator Jody Klein on Nov. 9, recommending the county seek independent verification of the proposal rather than from "incinerator promoters."

Bradley Angel, of Greenaction in California, and Terry Nordbrock, with Families

Against Cancer in Tucson, cite a number of objections to the proposal.

"We're up to our eyeballs in very similar proposals, all over California," Angel said during an interview by cell phone last week while en route to a public forum in Hanford, Calif. "We're seeing a pattern. The incineration industry has repackaged the incineration technology. There are always toxic emissions from incinerations. They can't possibly eliminate all the waste."

Burning plastic, for example, results in the creation and emission of toxic dioxin, Angel said.

Angel, executive director of Greenaction, said a garbage gasification plant in the Alameda, Calif., area was recently rejected by the Alameda Public Utilities Board. The Santa Cruz, Calif., County Board of Supervisors recently voted to study a proposal from American Ref-Fuel to build a giant waste-to-energy garbage incinerator to burn waste from several counties.

The Hanford public forum was a follow-up to the Alameda rejection, Angel said. He hopes to arrange a similar forum in Cochise County.

"The potential for liability is enormous," he said. "There's been an alarming trend for government agencies to approve these without sufficient data. We're urging everyone to take a deep breath, have a public process and put all the facts on the table. The companies are making wild, fantastic claims that are not holding up to scrutiny."

Nordbrock is also concerned about whether GER's promises regarding emissions can be validated.

"It's potentially interesting technology," she said. "But it does not seem safe. You

can make money accepting hazardous waste."

Does it work?

During his presentation on Nov. 9, Cummings showed a video to the audience that was produced by Startech Environmental Corp., a producer of plasma torch technology.

At that time, Startech had not yet been approached by GER, said Chad Gonzalez, a Startech sales associate.

Contacted by the Herald/Review on Thursday, Gonzalez said, "We just made contact with them last week. They want us (to submit a proposal) and two other companies (which were unknown to Gonzalez)."

The Startech process uses a plasma torch to create temperatures inside a chamber up to 30,000 degrees Fahrenheit, "four times the temperature of the sun's surface," Gonzalez said. The process does not, however, use pyrolysis, he added.

Although not in use anywhere in the United States, the plasma torch technology is being successfully used in Japan to turn waste into bricks, Gonzalez said.

Gonzalez also referred to plasma torch technology first being used to dispose of chemical weapons at the Army's Aberdeen, Md., Proving Grounds in 1999.

Conflicting information exists on the success of the tests.

An October 2000 Startech press release, headlined "Startech Environmental and Burns & Roe selected by U.S. Army for Chemical Weapons Destruction Program," says the process was selected for "the safe and irreversible destruction of the United States' stockpile of chemical weapons."

However, an examination of the Board on Army Science and Technology's "Evaluation of Demonstration Test Results of Alternative Technologies for Demilitarization of Assembled Chemical Weapons" shows that Startech's technology did not pass with flying colors.

The test was conducted for the Assembled Chemical Weapons Assessment program by Burns & Roe, in partnership with Startech.

"The chemistries of all four of the primary technologies, (including plasma arc) can decompose the chemical agents with destruction efficiencies of 99.9999 percent. However, each technology package raises other technical issues that must be resolved. One of the crucial issues is the identity and disposition of byproducts," the report said.

"Based on input from the ACWA Dialogue, the plasma arc process was deemed unlikely to obtain public acceptability due to the incomplete demonstration and the perceived similarity to incineration," according to ACWA's Sept. 30, 1999, report to Congress. "The process was not validated for agent destruction."

That assessment was confirmed Thursday by Kathy DeWeese, public information officer for ACWA.

"The process was approved for demonstration," she said. It is not now being used by the Army.

The U.S. Environmental Agency, in a February 2002 fact sheet, said: "EPA believes the gasification systems processing hazardous secondary materials are better viewed as a production or manufacturing operation rather than a hazardous waste management activity."

## The origins

How did this all come about in the first place?

Lee Basnar, a columnist for the Herald/Review, said he was investigating ways to remove cardboard from the landfill for recycling about a year ago. He approached Call to discuss an idea he'd come across for converting cardboard to energy, but that bore no fruit, Basnar said Thursday. About two or three months ago, Call asked Basnar to research the GER proposal, knowing of Basnar's interest in the landfill.

Cummings said that Robert Brown of Green Valley, a consultant for Arizona Public Service, approached Hamilton with information about GER and arranged a meeting. Basnar was privy to what was happening and wrote a column about the proposal, which was published Nov. 4 in the Herald/Review.

Why Cochise County?

"It fits our profile," Cummings said last week.

The county's size, lack of opposition to the idea, control over waste and the "ability to put energy onto the grid" make the county attractive, he said.

Cummings characterized his reception in Bisbee Nov. 9 as "outstanding," adding, "The majority of the board seems to be very positive."

Newman was in the minority. He feels Call and Hamilton were overly enthusiastic about the proposal.

"The spirit of the meeting was that the county was leading the effort, and that's why I urged caution," he said.