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Miracle metal

Alcoa and ERI team up and dig deep by urban mining aluminum in electronics

By Nick Wright
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Of the aluminum produced during the last 100 years, 75 percent of it is still in use around the world, according to John Shegerian, CEO and co-founder of Electronic Recyclers International, Fresno, Calif., the largest e-waste recycler in the world. "Aluminum is considered both the infinite recyclable and the miracle metal," he says, for its ability to be endlessly recycled, resmelted and reproduced.

This past March, aluminum-producing giant Alcoa, Pittsburgh, Pa., invested a stake in ERI, along with its abilities to recycle more than 160 million pounds annually of electronic waste. The stake gives both companies an opportunity to push that 75 percent even higher. Alcoa's encyclopedic expertise on all-things aluminum combined with ERI's fast-growing geographic footprint will help "grow and establish the required infrastructure in this country to deal with consumer electronics in an environmentally and socially effective way," says Kevin Anton, vice president and chief sustainability officer at Alcoa.

Consumer electronics represents one of the biggest growth markets for aluminum, Anton says. Part of Alcoa's vision isn't just to produce the versatile metal but to commit to the framework for its recyclability, which nearly guarantees its availability. The company pioneered that concept with the aluminum can. "When Alcoa introduced the aluminum can and helped the can prosper, one of the things we did right behind that was put in an infrastructure so that the can could be recycled," Anton adds.

Alcoa and ERI haven't wasted time establishing their partnership, recycling not only aluminum but a facility as well. By January 2012, ERI will be the first tenant in Alcoa's Badin, N.C., smelting facility that has sat idle since the company closed it in 2007. Until the plant, which will become ERI's southeast regional headquarters, is retrofitted completely, ERI currently is setting up temporary digs in an adjacent facility. "The community has already embraced us, and we're going to be providing a couple hundred new jobs there, which is, of course, important to any local economy in the U.S. right now," says Shegerian.

Before the official stake, according to Anton, Alcoa collaborated with ERI in 2010 to develop the free Aluminate iPhone app, which, using the phone's location features and Alcoa's databases, tells users where they can recycle their aluminum cans nearby and how much money they can expect in redemption. "We love that. It's so avant-garde for a 125-year-old company to have an app," Anton says. The app now pulls data from 1-800-Recycling.com, ERI's popular recycling search engine.

Working with Alcoa's real estate and logistical teams, ERI will tap into Alcoa's international presence, Shegerian says, although nothing is slated to be announced until later this year. The companies are exploring opportunities in India, Brazil, Canada, Asia and Europe. "I don't think it'll be too long before you start seeing an expanded presence internationally for ERI," Anton adds. Alcoa has operations in 31 countries, according to its website.

Urban mining

Consumer electronics--laptops, cell phones, digital cameras-- aren't only ubiquitous but also become obsolete as each generation of technology turns over on a near-annual basis. That gives Alcoa and ERI several synergies to drive sustainable practices, particularly one that both companies see as the basis for their partnership: urban mining.

"Let's get [the aluminum] before it hits the landfill," Anton says of urban mining. "Aluminum scrap has always had great intrinsic value, and the world is just going to have to get smarter because you can't afford to keep throwing things out. You have to design things more effectively, put collection technology and processes in place."

Shegerian points out that as technology and awareness in the United States about sustainability has increased, urban mining only will grow. Plus, manufacturers and OEMs of airplanes and electronics, for example, will benefit from branding their products as recycled. "It's so perfect for the terminology and vernacular that is getting tremendous pickup as a term in the industry," he says, noting aluminum sets the benchmark at 95 percent energy savings when it's recycled as opposed to being created from virgin ore. "By urban mining, Alcoa doesn't have to deplete the limited natural resources that are found below the ground."

Urban mining represents both a future and present consistent feedstock for Alcoa, Shegerian says, "which closes the cradle-to-cradle loop of what [Alcoa] is trying to accomplish in terms of recycling aluminum." Alcoa also will become an affiliate member of the Basel Action Network, a group of which ERI was a founding member, that is devoted to eliminating the disproportionate impact of trade in toxic chemicals and materials on developing countries, according to a press release.

"A market that effectively didn't exist at the beginning of this century is growing rapidly for us," Anton adds. "And we just see wonderful things coming out of this." **MM**

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