



It's waste not, want not at super green Subaru plant

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Photo By Tom Strickland for USA TODAY

LAFAYETTE, Ind. — Subaru's giant assembly plant here is on track to produce 180,000 cars this year. Yet the automaker pledges that virtually none of the waste generated from its eye-popping output will wind up in a dump.

Copper-laden slag left over from welding is collected and shipped to Spain for recycling. Styrofoam forms encasing delicate engine parts are returned to Japan for the next round of deliveries. Even small protective plastic caps are collected in bins to be melted down to make something else.

All told, Subaru says 99.8% of the plant's refuse is recycled or reused so it doesn't go to a landfill. That includes a small portion, about 5%, that goes to a waste-to-energy plant that burns waste to make steam to heat Indianapolis' downtown.

Subaru is one of a growing number of companies claiming or working toward "zero landfill" status. While success earns environmental bragging rights — Subaru has TV ads about this plant's efforts — reuse and recycling also cuts costs to the tune of millions of dollars a year.

Other companies, from brewer Anheuser-Busch ([BUD](#)) to imaging-equipment maker Xerox ([XRX](#)), say they are going zero-landfill as well.

But it isn't always easy. The world's largest retailer, Wal-Mart ([WMT](#)), which deals with a mountain of boxes, returned products and thousands of stores, is trying for a 25% solid waste reduction this year as part of the waste war declared by CEO Lee Scott three years ago.

Environmentalists and waste watchers say individuals and companies can learn from leading-edge corporate clutter fighters.

The zero-landfill movement is "not as popular as it should be," says Allan Gerlat, editor of the trade publication *Waste News*. "It's readily approaching waste at an earlier level in the stream. ... It's a more efficient way to go about it."

While the trend has caught on in Japan, in the USA, "We're just starting to adopt zero waste," says Gary Liss, a waste consultant based in Loomis, Calif.

Japanese-owned auto companies have a head start. Toyota ([TM](#)) and Honda ([HMC](#)), among others, long have practiced *kaizen*, or continuous improvement. Among its tenets is reduction of *muda*, or waste, a costly drag on production.

Their plants usually have key suppliers nearby who practice just-in-time delivery — daily deliveries of key parts. That means an ample number of otherwise empty trucks that can carry back waste for reuse at no added cost.

Workers are gung-ho greenies

At Subaru, eliminating, recycling or reusing even the tiniest stuff is treated with an almost religious fervor among the 2,842 workers.

"We can talk trash all day," says Denise Coogan, the environmental affairs manager who means shop-floor discards, not basketball-court braggadocio.

Subaru pursues no-landfill status while churning out vehicles: 147,156 Subaru Legacy, Outback and Tribeca models and Camrys for partner Toyota last year.

The Lafayette plant opened in 1989 as a joint venture of Subaru and Isuzu. But it wasn't until 2002, the year before Subaru parent Fuji Heavy Industries became sole owner of the plant, that it got serious about its zero-landfill goal. Plant officials set a five-year deadline and say they met it in 2004, three years ahead of schedule.

After the five-year goal was set, plant managers started by analyzing what they were throwing away. "One of the first things we did was Dumpster dive," Coogan says. They spread all the trash out on the pavement to get a good look.

The team immediately saw that lots of the flotsam and jetsam could be coordinated into separate heaps for efficiency. For instance, plastic shrink wrap all could be thrown in the same barrel and more easily recycled. Ditto for the pins left over from pop riveting.

Enlisting the help of suppliers

A big part of the effort, and a big factor in cutting costs as well as waste, was persuading suppliers to take back packaging or other items removed during the automaking process and find ways to reuse them. Why throw away or melt down plastic packaging that can be reused to protect another load?

Having suppliers close by helped make the case for having them take back in their empty trucks waste for reuse. Seats come from a company in Frankfort, Ind., a half-hour drive away. Dashboards come from Greencastle, Ind., an hour away.

Subaru, however, still had to find a way to tackle its own manufacturing waste, including:

- Steel.** A car's fenders, roof and body are stamped by giant presses from sheet metal, like cutting cookies from a sheet of dough. Subaru found it could limit excess by simply getting the right size steel roll for the parts. They saved 102 pounds of steel waste per car.

- Wood.** Pallets commonly are reused here, as in just about every factory. But when they are no longer usable at Subaru's plant, they are rebuilt, if salvageable, or ground into mulch for gardens.

•**Plastic.** Flawed plastic bumpers that can't be installed are ground into pellets to make new bumpers. When a supplier's blue plastic sheeting proved hard to recycle, the supplier was able to switch to a clear shrink wrap. Layers of protective plastic in some parts shipments were eliminated when it was found they could arrive safely without it.

•**Styrofoam.** Reuse paid greater dividends. Styrofoam inserts protecting engine parts can be used for five trips from Japan before they have to be recycled. The reuse effort has saved \$1.3 million a year, Coogan says.

While all the obvious recycling has been done, officials are still trying to squeeze out more. Last year's 99.8% recycle and reuse rate marked a 0.2 percentage point improvement over 2006. "It becomes harder and harder as you get closer," says Senior Vice President Thomas Easterday. As a result, Coogan's goal is morphing from recycling waste to minimizing its creation in the first place.

Residual waste that can't be re-used or recycled becomes steam for heat. It is trucked to Covanta Energy's waste-to-energy plant an hour's drive away in Indianapolis. There it joins city rubbish as fuel for the massive boilers that supply steam to the city's downtown. Ashes go to the landfill, but the process reduces waste volume by 90%.

To handle its mountain of recyclables, Subaru has a contractor on the plant floor with a 30-worker team that collects recyclables from around the shop floor all day. The process also requires the cooperation of Subaru's assembly employees. For example, Rick Cordray, 48, has to toss the protective plastic caps from air-conditioning compressor units into a nearby bin.

"I'm a pretty good shot," he says.

To reinforce the message with employees and add to its recycling quotient, the plant has multicolored barrels in break areas for workers to recycle personal waste. Yellow barrels for glass, red for aluminum cans and so on.

Saving trees, saving money

Like Subaru, other companies have discovered that recycling isn't just public relations. Being green can save some real green.

Toyota says it has a 97% zero-landfill status average over its 14 assembly plants. Copy-machine maker Ricoh has been zero-landfill at its U.S. plants since 2002.

Aamco Transmissions, the 885-store chain in the USA, has started a program with franchisees to dramatically reduce waste. Strategies include recycling cleaning solvents and using waste transmission fluid to heat stores. CEO Todd Leff estimates the package could net store owners another \$25,000 a year.

Fetzer Vineyards, a big California winemaker, started its waste-management team in 1990 primarily as a search for cost savings, particularly to cut what it was spending on garbage hauling. Fetzer decided to do its own trash removal, but costs continued to add up with every trip to the dump.

Then, using many of the same tactics employed by Subaru, it was able to reduce its refuse volume from 1,724 cubic yards in 1990 to 60 cubic yards by 2005, says Ann Thrupp, the sustainability manager. Now, rubber bands holding rolls of labels go back to suppliers. Some cardboard boxes are reused. Stems and leftover vegetation from winemaking become garden topper.

Likewise, Anheuser-Busch has been able to recycle 99% of the solid waste generated at its 12 breweries. "We're looking at how do we get that last 1%," says John Stier, director of environmental affairs. Among other things, the brewer composts the beechwood chips that it ballyhoos in ads as giving its beers distinctive flavor.

Retailers can face a tougher challenge when it comes to zero-landfill because of their many stores, need to dispose of spoiled food and huge inventory that includes household hazardous wastes.

Some are making major progress. Safeway ([SWY](#)), which operates 535 Safeway, Vons and Pavilions supermarkets in California, says it diverts 85% of its solid waste from landfills in the state. Target ([TGT](#)) says it has cut waste by 70%. The biggest retailer, Wal-Mart, lags behind because it started later than the others, consultant Liss says.

Wal-Mart CEO Scott set a zero-waste goal for the cost-conscious retailer in 2005. "Think about it," he said at the time. "If we have to throw it away, we had to buy it first. So we pay twice. Once to get it, once to have it taken away."

Though only shooting to cut waste by 25% as a first step, the chain is making progress. Wal-Mart says it found an innovative way to recycle disparate plastic waste. Store crews are bailing it between two pallets. The retailer has recycled millions of pounds of plastic hangers, office paper and aluminum cans. Wal-Mart now is working with suppliers to reduce product packaging, both shipping materials and the final retail package, says Rand Waddoups, senior director of sustainability.

The next step: The rest of us

If companies can do it, why can't individuals?

Companies, of course, have an incentive to save money. But Subaru officials say some of their techniques would work for consumers.

They know. They've tried them.

"You should have seen my wife's face when I asked if we could tip over the trash can," Easterday says.

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