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Waste Minimization Program

The United States Department of Environmental Protection describes "waste minimization" as "source reduction practices that reduce or eliminate waste generation at the source; and environmentally sound recycling practices, where source reduction is not economically practical." Waste minimization is a "prevention strategy" rather than an "end-of-pipe" treatment strategy. The reduction or elimination of waste generated at its source is the priority.

FirstEnergy has a long-term commitment to waste minimization, a commitment to source reduction, and if source reduction is impractical, a commitment to environmentally sound recycling. An effective program, in addition to protecting the environment, also has a positive economic value for FirstEnergy.

An effective waste minimization program must survey all its waste generation activities. Activities that can be modified or eliminated to reduce waste are a primary target in FirstEnergy's program. Finding alternate ways of conducting an activity reduces waste generation.

Purchasing only the amount of material needed reduces cost and eliminates waste. Recent changes and upgrades in FirstEnergy's computer systems manage inventories more effectively, reducing excess material inventories.

FirstEnergy's program to reuse materials, in particular used electrical equipment at its Ravenna facility, have reduced costs to FirstEnergy by reducing purchases of new equipment and yielded a positive economic flow.

FirstEnergy coal burning plants generate over two million tons of ash annually. This ash is aggressively marketed for use in a variety of products including concrete, structural fills, roofing shingle granules, and ice control.

At FirstEnergy's Bruce Mansfield Plant scrubber sludge is used to make gypsum which is then used to make wallboard. These programs not only eliminate waste streams but also provide useable products.

FirstEnergy program of evaluating and repairing electrical equipment including transformers and other equipment at FirstEnergy's five electrical equipment repair shops dramatically reduces new equipment purchases.

When reuse is not practical, recycling is used whenever possible. FirstEnergy has programs for recycling metals, including copper, aluminum and steel throughout its system. Recycling of batteries, cardboard, lubricating oil, paper, street lamps, wood products, and other materials is conducted by FirstEnergy. Over 50 waste streams are recycled rather than discarded.

One benefit of recycling is that it prevents the release of carbon dioxide that would have been released had the finished products been made from raw materials.

Substitution by less hazardous materials when possible benefits both the environment and FirstEnergy's employees who might be exposed during use. Programs to eliminate the use of hazardous solvents are in place, substituting less hazardous materials with recycling a goal in the selection of the replacement material. As one example, substitution of the solvents used in parts washers with a solvent of much lower hazard has been effective.

To implement a waste minimization strategy, FirstEnergy has a Corporate Waste Minimization Team. The goal of the Team is to identify waste minimization opportunities, support the implementation of a minimization plan and quantify the effectiveness. The members of the Team are drawn from purchasing, operations, environmental and other disciplines to provide a broad view of FirstEnergy's day-to-day activities.

FirstEnergy is an active participant in the US Environmental Protection Agency Waste Wise Program which recognizes the efforts of participants for their waste minimization efforts. The photos below show some of the efforts described above.



LEFT: Metals that have been sorted for recycling.



ABOVE: Plastic and wooden spools used to store electrical wire. We started to replace wooden spools with plastic ones that can be used 200 times, versus wooden spools that can be used only about two or three times.

RIGHT: An employee at FirstEnergy's recycle center in Ravenna separates waste materials.



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