

# WASTE REDUCTION



**Luminant**

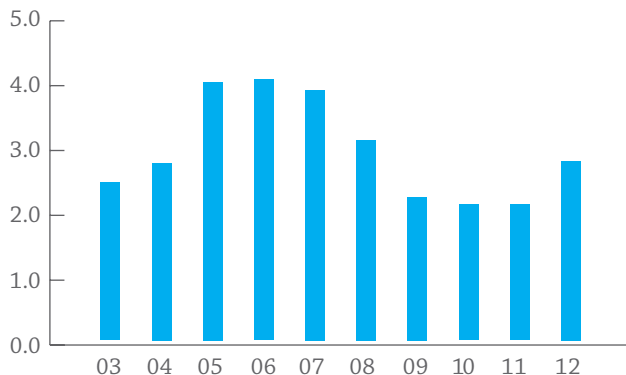
Luminant's programs to reduce chemical use, replace hazardous substances with nonhazardous ones, and minimize and reuse materials continue to achieve major environmental benefits. The reuse of materials decreases energy costs, replaces raw materials, minimizes emissions and saves landfill space. And tracking how and where hazardous waste streams are produced helps Luminant develop programs to eliminate or reduce these quantities, as does buying as many recyclable materials as possible. The result is a significant reduction in waste of all kinds and a substantial increase in recycling, reuse and development of marketable products.

## Minimizing Impacts

- Recycling goes way beyond paper and aluminum cans. Since 1993, nearly 43 billion pounds of materials have been recycled, including 2.7 billion pounds in 2012.
- Coal combustion byproducts from using coal to fuel company generating plants account for the largest individual quantity of materials recycled. Since Luminant's marketing program began in 1986, more than 46 billion pounds, including 2.6 billion pounds in 2012, have been diverted from landfills and put to use by the roofing and concrete industries as well as in road construction and the oil field.

## RECYCLING TOTALS IN BILLIONS OF POUNDS

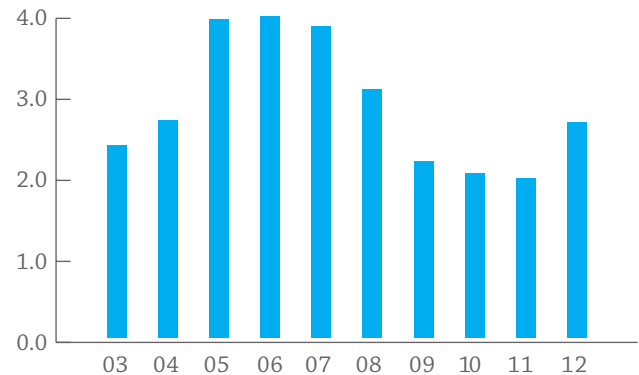
Total since 1993: 42.9 billion pounds



2007 and forward are Luminant-only recycling totals; previous years are corporate-wide recycling totals.

## COAL COMBUSTION BYPRODUCT SALES IN BILLIONS OF POUNDS

Total since 1986: 46.4 billion pounds



## Putting Combustion Byproducts to Work

- Luminant has been instrumental in developing commercial markets for fly ash, bottom ash and other coal combustion byproducts that remain after using coal for electric generation. These products are used by a variety of industries.
- Fly ash finds new life as a cement substitute in concrete for highway, bridge and building construction and for pavestones and airport runways. Luminant fly ash is employed extensively in highway projects across Texas.
- Fly ash is also used in roofing shingles.

- Wallboard made from synthetic gypsum, a form of scrubber byproduct, can be used in the construction of new homes.
- Other byproduct applications include oil-field projects and hot asphalt mix for road construction.

*Combustion byproducts come to life in the High Five Interchange in Dallas.*



## Recycling for Reuse

- After 50 years of powering Texas, Luminant's retired North Lake Power Plant, located in Dallas County, took on a new role following its demolition. Millions of pounds of materials from the plant made their way to recycling centers around the world for reuse.



*Luminant's North Lake plant powered Texas for 50 years.*

- One by one, the plant's three units were imploded over a six-month period in 2012.
- Roughly 95 percent – 33 million pounds – of the plant was recycled, including steel, copper, concrete and parts of large equipment.
- At one time, North Lake was the largest generating station in the company's fleet, capable of generating 715 megawatts, enough to power more than 350,000 average Texas homes.
- Luminant recycled more than 105 million pounds of scrap metal in 2012, almost 2.3 times as much as in 2011.

## 2012 RECYCLING IN POUNDS

MATERIAL	QUANTITY
Antifreeze	339,000
Batteries, dry cell	800
Batteries, lead-acid	36,000
Bulbs	4,300
Coal combustion byproducts	2,665,414,000
E-waste	5,500
Oil filters	114,000
Oily water	1,343,000
Scrap metal	105,011,513
Used oil	2,713,000
<b>TOTAL</b>	<b>2,774,981,113</b>

