



GEMI[®]

Collecting the Drops:

**A Water
Sustainability
Planner**

Case Example

Southern Company: Saving Six Million Gallons with a Reusable Coolant Source at a Georgia Plant

Southern Company recognizes the role individual employees take in innovations that lead to water reuse and recycling at its facilities.

Russell Fackler, a Senior Laboratory Technician at one of Southern Company's U.S. power plants, was concerned that the plant chemistry sample cooling system was using too much water. The cooling water was a once-through system supporting the company's McDonough Electric Generating Plant in Cobb County, Georgia, using 200,000 gallons of county water per day. This once-through system was costing the plant over \$140,000 (USD) annually. Russell worked out the logistics with engineers and vendors to design a new system. The new system would use condensate water as the recycling (cooling) water and river water as the "heat exchange" water. A backup system was also designed to ensure the system would operate efficiently and continuously.

The system, in service since 2001, now services the 140 gallons per minute (GPM) cooling water requirement with a reusable coolant source. The only cost associated with the operation is the power consumption of the circulating pump at about \$7.00 per day. The plant water usage consequently has been reduced by 140 GPM, resulting in a savings of over six million gallons per month. This innovation has proven itself by eliminating 75,000,000 gallons of costly water wastage, which is enough to supply 2,000 Cobb County homes with their annual drinking water needs. At a cost of \$2.10 per 1000 gallons, this results in a plant savings of over \$150,000 per year.