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## **SAS Solar Farm**

The Solar Farm:

- As of December 2008, the 1-megawatt photovoltaic solar array began generating power at SAS world headquarters in Cary, N.C.
- The SAS solar farm provides clean, renewable power to the Progress Energy utility grid. Energy produced helps Progress Energy meet its mandated goal of generating 12.5 percent of its energy through renewable resources or energy efficiency methods by 2021.
- The SAS solar farm generates an estimated 1.7 million kilowatt-hours (kWh) per year, reducing carbon dioxide emissions by over 1,600 tons annually. This is equivalent to:
  - Carbon dioxide emissions from the consumption of more than 167,000 gallons of gasoline.
  - Enough energy to power 160 average-size North Carolina homes.
  - Operating an average 15W compact fluorescent light (cfl) for 120 million hours.
  - Enough power for 616,438 LED night lights used eight hours per day.
- The solar farm was designed by SunPower and installed by Southern Energy Management.

Environmental Sustainability:

- The SAS solar array generates clean renewable energy, equivalent to utility-generated carbon emission offsets of planting 7,000 trees.
- The solar array creates zero waste, which means:
  - No waste disposal costs
  - No money spent on foreign oil
  - No nuclear waste
  - No carbon emissions
- SAS did not cut down any trees to build its solar farm.

Most of the materials used in construction are recyclable.

How It Works:

- The SunPower Tracker directional arrays track the path of the sun (east to west) via a straight-line single axis to achieve greater efficiencies.
  - A global positioning system mechanically tracks the sun throughout the day, then rotates and tilts the assembly for maximum sun exposure.
  - Directional arrays are capable of generating near-peak capacity for a longer period of time, about five to six hours per day at SAS' location compared to four hours for fixed arrays.
  - The tracker increases energy capture by up to 25 percent over fixed systems, greatly reducing land-use requirements.
- The solar farm has 5,040 ground-mounted Sanyo solar panels.