



Biofuels' Contributions to South Carolina's 25x'25 Energy Future

What is 25x'25?

25x'25 is a national renewable energy initiative based in the agriculture and forestry sectors that seeks to produce 25% of the total energy consumed in the United States by the year 2025, while continuing to produce safe, abundant and affordable food, feed and fiber.

25x'25 in South Carolina – Partners Seeking the Vision

South Carolina is poised to be a major contributor to the 25x'25 Vision by producing clean, affordable, home-grown energy that will revitalize our economy and create new opportunities for agriculture, forestry and the citizens of South Carolina. The South Carolina Biomass Council (SCBC), a coalition of business, university, nonprofit organization and agency leaders from across the state, partnered with the 25x'25 Initiative to forge a sensible pathway to bring the vision to life in South Carolina.

Why 25x'25?

Maximizing renewable energy production to achieve 25x'25 would bring substantial economic gains to South Carolina¹ including:

- A \$284 million increase in net farm income by 2025
- Over \$2.4 billion in new economic activity
- Over 13,150 new jobs
- Diverse land use and greater cropping choices
- Increased local and state government tax revenue

Aggressively pursuing and achieving the 25x'25 Vision will improve national security by reducing our dependence on imported fuels. It will also support the growth of agricultural and rural economies in South Carolina. Increasing our use of biofuels also provides important environmental benefits by reducing regulated emissions and encouraging additional on-farm Best Management Practices that reduce soil erosion, increase soil fertility and improve water quality.

BIOFUELS – South Carolina's Potential

By 2025, South Carolina has the potential to produce 14.7 million dry tons of cellulosic feedstocks, and 900 million gallons of ethanol from cellulosic materials.²

Progress to Date

- South Carolina currently has no commercial ethanol production capacity.³
- South Carolina consumed over 177 million gallons of ethanol in 2008 – approximately 6.7% of the total volume of motor gasoline sold in South Carolina.⁴
- Clemson, South Carolina State University and Savannah River National Lab is developing a cellulosic biofuels pilot plant in North Charleston utilizing renewable indigenous resources.⁵
- South Carolina has a biodiesel production nameplate capacity of 58 million gallons.⁶
- South Carolina has four commercial biodiesel production facilities at this time (in Taylors, Warrentonville, Estill, and North Charleston).⁷ South Carolina biodiesel facilities process animal fats, yellow greases, and virgin vegetable oils into biodiesel fuel.
- South Carolina has 68 E-85 ethanol pumps and 53 biodiesel blended pumps in the state.⁸ Numerous distributors provide blended biodiesel fuels for bulk delivery to farms and fleets.
- Kinder-Morgan has biofuels storage and blending facilities at the terminal in Greenville.
- There are 98,659 flexible fuel vehicles capable of using E85 fuel in South Carolina.⁹
- South Carolina provides tax incentives for biofuels producers and distributors.

Key Challenges

Additional growth of biofuels production in South Carolina will largely be based on federal government increases in blend levels, increasing the availability of blend pumps and more public awareness and acceptance of the multiple benefits of biofuels. South Carolina researchers and landowners will need to identify the most productive feedstocks as well as solve the logistical challenges relating to moving biomass. Public and private support in developing and finding financing for cost-effective technologies for producing cellulosic ethanol and advanced biofuels will help South Carolina achieve its full biofuels production potential.

Questions about 25x'25 in South Carolina? Contact SCBC Coordinator, Erika Myers, at emyers@energy.sc.gov.

^{1,2} "25% Renewable Energy for the United States by 2025: Agricultural and Economic Impacts." University of Tennessee. BEAG, 2006.

³ Renewable Fuels Association

⁴ US Energy Information Administration – South Carolina Energy Profiles

⁵ *Greenville and The Upstate News*. Feb. 27, 2010

⁶ National Biodiesel Board Member Plant List

⁷ Biodiesel Magazine. <http://www.biodieselmagazine.com/plantmap/> (facilities indicated on map may or may not be in active production)

⁸ Palmetto State Clean Fuels Coalition

⁹ Growth Energy