



2012 Wyoming Award Winners:

364	April 1, 2012	WyoComp Heath Van Eaton 307.432.4073 Cheyenne, WY 82001	Cost Effective Cellulosic Ethanol	DOE
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Abstract:

This Phase I proposal is submitted to DOE under the Biomass Cellulosic Biofuels section. The research focuses on applying thermochemical conversion technologies to produce cost effective ethanol using WyoComp's broad network of agricultural supplier's by-products, namely milo stalks, corn stalks and wheat straw. One of our Nation's greatest challenges is to reduce our dependence on imported petroleum and lowering emissions. Approximately 14 million barrels of oil per day are needed to support U.S. transportation needs, 60% of that oil being imported, which also creates energy security concerns (DOE, 2009). Current ethanol production technologies using grains like corn are commercially proven, but lack the overall ability to address the U.S.'s growing energy needs. Based on DOE studies and research, cellulosic ethanol production using thermochemical conversion is the only viable scenario to displace up to 30% of the U.S. petroleum use by 2030 (NREL, 2007). The research conducted by WyoComp will prove its ability to produce cellulosic ethanol well under DOE's target cost of \$3.00 per gallon at the plant gate while demonstrating it has the established input markets to support the startup of the Nation's first commercial scale cellulosic ethanol plant.