



Positive Energy Benefits of Ethanol | 2010

On June 21, The United States Department of Agriculture (USDA) Office of Energy Policy and New Uses released a report that clearly demonstrates the overwhelmingly positive energy benefits of ethanol.

Some highlights of the study:

- A dry grind ethanol plant that produces and sells dry distillers grains and uses conventional fossil fuel power for thermal energy and electricity produces nearly *two times more energy* in the form of ethanol delivered to customers than it uses for corn, processing, and transportation.
- Using one unit of fossil energy in a typical corn-based ethanol plant results in 1.9-2.3 units of energy output.
- If the plant utilizes up to 50% biomass for power, ethanol plants achieved a net energy ratio of 2.8.
- The report indicates that current ethanol plants yield “... a *substantial net energy gain* ...”
- This information provides a substantial update to the USDA’s previous dry mill estimate of 1 unit of fossil energy resulting in 1.77 units of ethanol energy, and indicates that *ethanol’s net energy ratio is significantly higher* than originally reported.
- Further, if the most up-to-date dry mill energy efficiency data prepared by the University of Illinois-Chicago had been used for the USDA analysis, the average dry mill (producing dried and wet distillers grains) would produce a 2.1-2.6 net energy ratio, according to calculations performed by the Renewable Fuels Association.
- Overall then, ethanol has made the transition from an energy sink, to a moderate net energy gain in the 1990s, to a substantial net energy gain in the present. *And there are still prospects for improvement.*

In recent years, corn-based ethanol has been ridiculed and attacked as a domestic fuel that can’t stand on its own two feet. This study dispels that myth and offers corn-based ethanol as a successful, renewable fuel that could solve this country’s reliance on foreign oil.

Corn-based ethanol deserves to be recognized as an advanced biofuel.