Bioenergy for Energy Access and Rural Development

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SUMMARY

• Rural economies need energy access to thrive

• Bioenergy is helping create a Rural America that is “built to last”

• Sustainable bioenergy is a way to boost agricultural productivity in developing countries

• Research and data are needed to validate best practices (GBEP indicators of sustainable bioenergy)
Energy poverty underlies food insecurity

Preventable post-harvest losses steal 30 – 70% of food from rural smallholders.

Energy access improves the yield of each step in the food supply value chain.
USAID Energy for Agriculture Grand Challenge

http://www.poweringag.org/
Deployable bioenergy options for sub-Saharan Africa

Cotton stalks → Briquettes

Cassava → Ethanol

Anaerobic Digesters for biogas for cooking and/or electricity.
President Obama strongly supports Rural Development Administration’s strategy for a rural economy “built to last”, which translates to Sustainable Development for Rural America.
Promoting Rural Development in the U.S.

- Innovation from Research
- Creating New Markets
- Investing in Renewable Energy

U.S. Real Farm Assets

- Firms Producing Bio-Based Products

U.S. Farms Productivity Gains

Source: USDA BioPreferred Program.
President Obama supports an “all-of-the-above” domestic energy policy

“We’re not going to be able to just drill our way out of the problem of high gas prices…If we are going to control our energy future, then we’ve got to have an all-of-the-above strategy. We’ve got to develop every source of American energy—not just oil and gas, but wind power and solar power, nuclear power, biofuels.”
U.S. energy imports are decreasing

- Imported Crude Oil and Finished Gasoline: 55% in 2000, 49% in 2011
- U.S. Crude Oil: 43% in 2000, 40% in 2011
- U.S. Ethanol: 1% in 2000, 10% in 2011
U.S. support for all stages of the bioenergy value chain

Biomass Crop Assistance Program

Biorefinery Assistance Program

Renewable Energy for America Program

Bioenergy Program for Advanced Biofuels
“All-of-the-above” feedstock development
The U.S. promotes an “all-of-the-above” approach for Bioenergy and Agriculture in Africa
The U.S. supported the ECOWAS Regional Forum on Bioenergy
The unsustainable traditional use of biomass for energy has deleterious effects on environmental services and human health.

ECOWAS delegates began the process of creating a regional strategy for sustainable bioenergy production and use.
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How do we connect rural smallholders to markets such that they can respond to and benefit from increasing global demand for agricultural production?
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EISA provides clear signals to commodity markets and the renewable fuels industry

1) Mandates domestic use of conventional ethanol to be “phased-in” from 2007 to 2015

2) Mandates domestic use of conventional ethanol to be capped at 15 billion gallons

3) Stable policies encourage planning and investment that promote national goals of energy security and economic growth
Production of corn has kept pace with demand

Use of the phrase “40% of American corn goes to biofuels” is misleading.

Approximately, 1/3 of the mass of corn used to make ethanol is returned to the feed market as DDGS.

Corn supplies for feed and exports are comparable to pre-EISA levels.

Source: USDA, Economic Research Service