United States Department of Agriculture

Renewable Energy Programs

Hawaii Biomass and Bioenergy Workshop – *USDA Regional Biofuels Roadmap*

September 24, 2010

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United States Department of Agriculture

Renewable Energy Programs

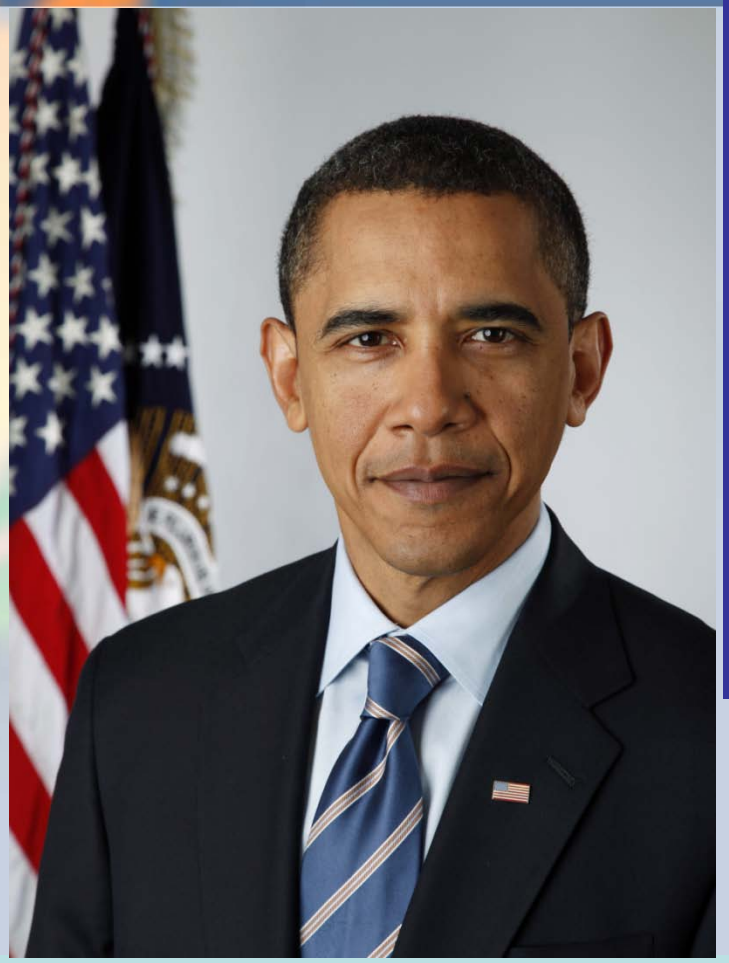
President Obama's Commitment to Renewable Energy

"Providing incentives for energy-efficiency and clean energy are the right thing to do for our future -- because the nation that leads the clean energy economy will be the nation that leads the global economy. And America must be that nation."

State of the Union Address Jan. 27, 2010

"To put people back to work today, and reduce our dependence on foreign oil tomorrow, we will double renewable energy production."

Jan. 3, 2009 Weekly Address

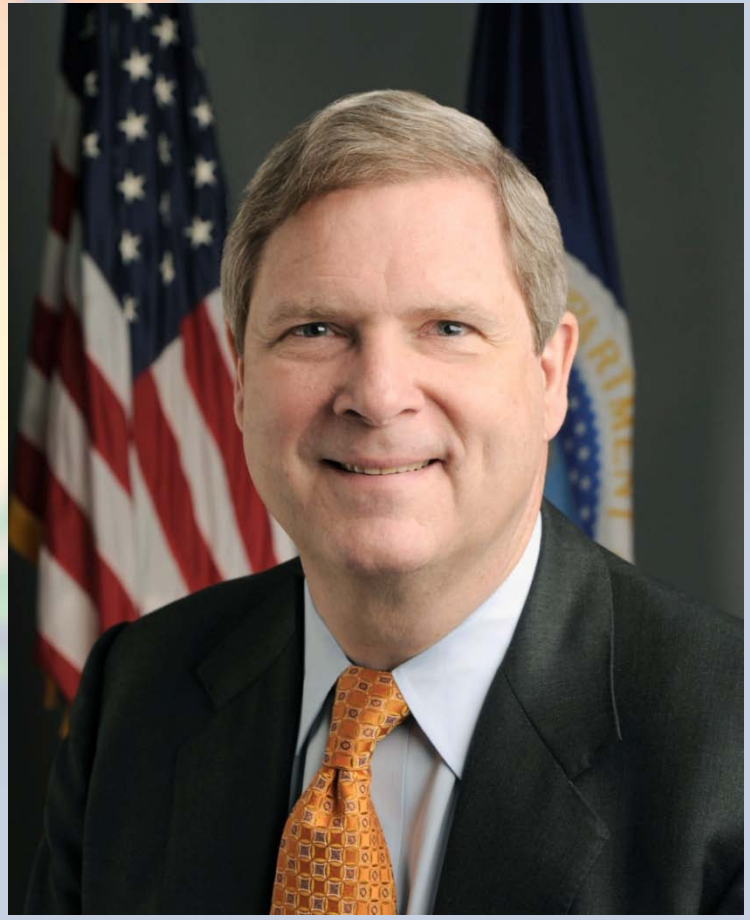


USDA United States Department of Agriculture

Renewable Energy Programs

"USDA is working to expand energy opportunities by producing alternative forms of energy and fuel, and to ensure that we are doing the research necessary to allow agriculture to transition away from its rather significant dependence on fossil fuels."

Tom Vilsack
Agriculture Secretary



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The Obama Administration Biofuels Interagency Working Group – Engineering A Coordinated Government Response

The First Billion Gallons

On May 5, 2009, President Obama signed the directive establishing a new working group to be chaired by the Secretaries of Energy and Agriculture and the Administrator of the EPA.

The group will work with the National Biomass Research and Development Board on:

- Creating a *biofuel market development program* to boost next-generation biofuels, increase use of flex-fuel vehicles, and assist retail market development
- Coordinating infrastructure policies

President's Steps to Boost Biofuels

- **Comprehensive Strategy**
  - Enhance American Energy Independence
  - Foundation for New Clean Economy
  - New industries and jobs
- **Biofuels Working Group Report (Growing America's Fuel)**
  - Roadmap for accomplishing 36 billion gallon by 2022
  - Leveraging resources to support 1st, 2nd, and 3rd generation renewable fuels
- USDA Programs Support
- Biomass Research and Development Board

Steps to Boost Biofuels Production

- **USDA Biofuels Strategic Production Report**
  - **Regionalization Strategies**
    - Existing eligible feedstock supply and land availability
    - Current and potential infrastructure capacity
    - Current and potential regional consumer demand
    - Additional Investment- 527 new biorefineries totaling $168 billion investment
  - **Renewable Biofuels Mandate of 36 bgy by 2022**
    i. Corn Starch Based Ethanol Mandate—15 bgy
    ii. Advanced Biofuel Mandate – 21 bgy
      - 13.4 bgy – dedicated energy crops
      - 0.5 bgy—Oilseeds (soy, canola)
      - 4.3 bgy – crop residues
      - 2.8 bgy – woody biomass

Steps to Boost Biofuels Production

USDA Biofuels Strategic Production Report

Objectives:

- Providing the practical knowledge from the field that can enhance various models for biofuel production;
- Identify challenges and opportunities for expanding the biofuels market;
- Help develop solutions to this massive undertaking.

Assumptions:

- Costs: $8 per gallon of capacity
- Size: 40 million gallon per year capacity
- Regions: Developed based on crops that are prevalent based on historic planting data and weather, soil and water conditions

Steps to Boost Biofuels Production

USDA Biofuels Strategic Production Report Regional Contribution

Region	Contribution to 21bg of RSF2
Southeast	49.8%
Northeast	02.0%
Central-Eastern	43.3%
Northwest	04.6%
Western	<0.3%

Steps to Boost Biofuels Production

USDA Strategic Biofuels Production Report- Southeast Region and Hawaii

States: Alabama, Arkansas, Florida, Georgia, Hawaii, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas

Feedstocks: Soybean oil, energy cane, biomass sorghum, perennial grasses, woody biomass

Other Points of Interest: Hawaii, Florida, Georgia, and Texas are the largest consumers of petroleum in the region. USDA has an MOU to provide biofuels to the Navy in Hawaii that involves research and development as well as implementation. With the Western Naval fleet in HI, there is already a consumption base from the Navy of 80 million gallons of fuel per year.