BioFuels Atlas

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Introduction

• BioFuels Atlas is a first-pass visualization tool that allows users to explore the potential of biomass-to-biofuels conversions at different locations and scales

• Tool highlights areas for biofuels production and infrastructure deployment

• Launched September 2010

• Over 10,500 site visits since launch

• Funded by DOE Biomass Program
Approach

• Web-based platform
  • OpenCarto-NREL developed this platform for multiple geospatial tools of shared code, updates, maintenance, and consistent functionality
  • Seven tools share the platform reducing development, maintenance, and updating costs (a potential 7:1 return for every dollar invested)

• Data Layers
  • Consistent and reliable data sources: DOE, EPA, USDA
  • Crop residues, methane, secondary mill and urban residues were calculated based on logical assumptions and methodologies

• Analysis
  • Biofuels potential based on user selected feedstocks and collection radius
  • Calculation based on feedstock chemistry (EERE Biomass Composition and Property Database) and yield (70% of EERE Theoretical Ethanol Yield Calculator)
  • User can change inputs and recalculate potential biofuels yields

• State Summary View & Tables- Traditional & Bioenergy data included
Query Functionality

Regional Query-blue highlights counties in region selected

Tabs for each data layer queried

Detailed data for each data layer; including infrastructure info; can download to excel
Analysis Functionality

User selects feedstocks for analysis

User enters radius

Tool sums each feedstock total for each county in radius

Potential biofuels production from selected feedstocks

Input assumptions; user can change and re-calculate
State View-Functionality

Download state tables and data sources

Summary of state fossil fuel use & infrastructure

Summary of state bioenergy production, use & infrastructure

Summary totals for each feedstock and biofuels potential