

UCS' Bioenergy Analysis and Policy

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Analysis

- UCS biomass resource assessments compared to DOE and EIA
- UCS renewables cost assumptions compared to EIA
- Under 25% RES policies, UCS projected biomass generation compared to EIA

Woody biomass supply

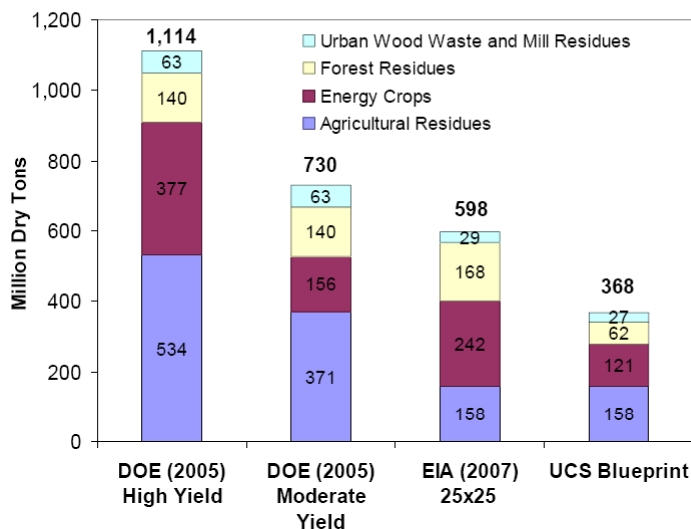
Our analysis includes:

- Logging residues from public and private land, pre-commercial thinnings, wood wastes from land cleared for development (FIA data)
- Mill residues and urban wood wastes

Does not include:

- Fuel load reduction, or pest/disease treatments
- Roundwood

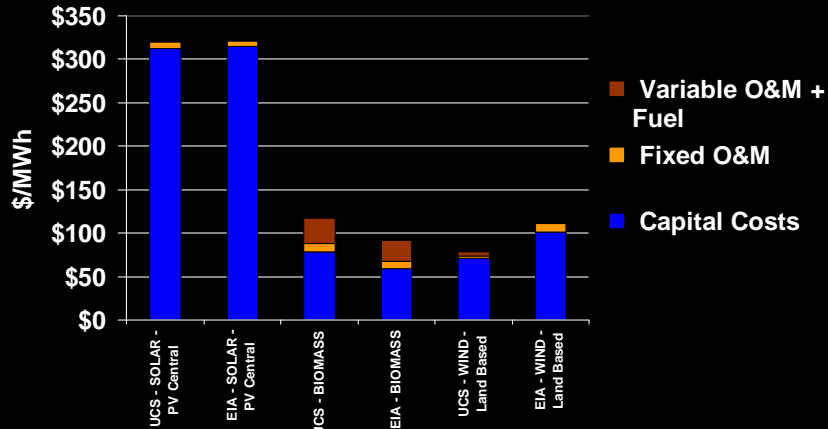
Figure G.2. Comparison of Bioenergy Potential Used in Various Studies



Sources: DOE and USDA 2005, and EIA 2007.

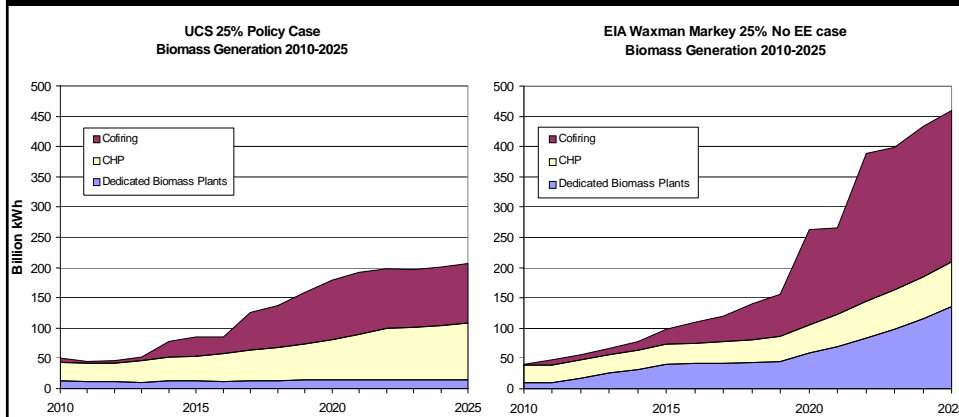
Note: EIA 25x25 and our Climate 2030 Blueprint numbers reflect supplies from the year 2030 at \$5.25 (2005\$)/MMBtu.

Levelized Costs Comparison (2015)



EIA Waxman-Markey RES analysis, UCS Climate 2030: A National Blueprint for a Clean Energy Economy

EIA projects over twice as much biomass as UCS



Policy

- Promoting ecologically-sound bioenergy systems that protect air, water and soil quality and bio-diversity.
- Support an RES biomass definition that:
 - Allows more materials from private lands than previous RES biomass definitions
 - Added sustainability standards
 - Included safeguards for critical lands
 - Allows the use of slash and other materials from national forests

Renewable biomass is different than traditional markets

- Renewable biomass has to be renewable in order to qualify for the market
- Environmental attributes (renewability and sustainability) are intrinsic to the renewable energy market
- Use of the resource can't degrade the ecological potential to produce sustained yield

UCS and SACE biomass definition consensus process

- Addressed RES definition of woody biomass from private lands
- Intended to develop a definition that:
 - Includes a wider range of biomass
 - Includes sustainability standards and safeguards
- Included forest owner groups, foresters, biomass plant operators, logger groups and conservation groups

Endorsing groups

- Union of Concerned Scientists
- Southern Alliance for Clean Energy (SACE)
- North Carolina Woodlands
- Ozark Woodland Owners Association
- Association of Consulting Foresters
- Biomass Power Association
- RollCast Energy
- Arkansas Association of Resource Conservation and Development Councils

Sustainability standards

- Minimize negative short-term impacts and protects against long-term deterioration of:
 - Water quality,
 - Soil productivity,
 - Wildlife habitat, and
 - Biodiversity
- Provides for the regeneration of the forest

Menu of verification options

- Forest owners would choose one of the following to demonstrate sustainability:
 - Forest management plans,
 - Third-party certification, or
 - State biomass best management practices (BMPs), if their state had developed them
- Primarily state enforcement, with a federal “backstop”

Safeguards or exclusions for critical lands

- On private lands
 - Imperiled and vulnerable forests
 - Old growth
 - Native grasslands
 - New plantations (on natural stands)
- On federal lands
 - Wilderness and roadless areas
 - National monuments
 - Conservation areas