Kentucky's 25x'25 Energy Future

The Economic Impacts and Land Use Changes of Increased Biomass Production

Change in Net Farm Income

2010	2015	2020	2025
$8,680,000	$36,500,000	$602,780,000	$1,930,650,000

Biodiesel Production - (Gallons)

	2010	2015	2020	2025
Soybeans	1,700,000	3,200,000	4,900,000	6,800,000
Yellow Grease	0	0	0	0
Total	**1,700,000**	**3,200,000**	**4,900,000**	**6,800,000**

Cellulosic and Agricultural Feedstocks - (Dry Tons)

	2010	2015	2020	2025
Energy Crops	0	3,500,000	25,800,000	52,200,000
Stover	0	300,000	600,000	1,000,000
Straw	0	200,000	400,000	500,000
Wood (all sources)	0	5,800,000	5,000,000	4,900,000
Total Cellulosic	**0**	**9,800,000**	**31,900,000**	**58,600,000**
Corn	200,000	300,000	300,000	500,000
Soybeans	0	100,000	100,000	200,000

Electricity Production by State and Census Region - (Kilowatt Hours)

	2010	2015	2020	2025
Corn Stover	0	140,000,000	230,000,000	300,000,000
Wheat Straw	0	190,000,000	240,000,000	110,000,000
Livestock	870,000,000	870,000,000	870,000,000	870,000,000
Wood	0	3,810,000,000	4,620,000,000	2,450,000,000
Energy Crops	0	1,290,000,000	15,280,000,000	39,970,000,000
Byproduct Ethanol	0	2,910,000,000	7,850,000,000	13,070,000,000
Total Biomass	**870,000,000**	**9,210,000,000**	**29,090,000,000**	**56,770,000,000**
Wind	10,000,000	10,000,000	20,000,000	30,000,000
Solar	20,000,000	30,000,000	50,000,000	60,000,000
Total	**900,000,000**	**9,250,000,000**	**29,160,000,000**	**56,860,000,000**

Ethanol Production - (Gallons)

	2010	2015	2020	2025
Corn	134,100,000	170,800,000	121,900,000	149,100,000
Corn Stover	0	18,100,000	47,300,000	85,500,000
Wheat Straw	0	10,300,000	18,300,000	39,100,000
Wood	0	194,700,000	223,800,000	393,800,000
Energy Crop	0	248,700,000	1,580,800,000	2,755,700,000
Total	**134,100,000**	**642,700,000**	**1,992,000,000**	**3,423,200,000**

Acres In Production

	2006	2010	2015	2020	2025
Corn	1,430,656	1,502,493	1,586,812	983,348	868,086
Soybeans	1,372,660	1,351,567	1,276,030	955,418	888,523
Wheat	569,384	640,934	496,348	395,834	365,282
Energy Crop	0	0	657,803	2,828,238	4,640,641
Hay	3,245,565	3,897,454	3,893,798	3,800,402	4,592,655

Estimated Agricultural Economic Impacts

	2010	2015	2020	2025
Total Industry Output - (Dollars)				
Direct	$ 64,600,000	$ 269,400,000	$ 2,138,600,000	$ 5,770,300,000
Total	$ 98,500,000	$ 422,200,000	$ 2,974,500,000	$ 7,871,800,000
Employment - (Numbers)				
Direct	1,142	4,748	28,726	87,682
Total	1,534	7,074	39,091	111,440

Estimated Renewable Energy Economic Impacts

	2010	2015	2020	2025
Total Industry Output - (Dollars)				
Direct	$ 235,400,000	$ 1,052,800,000	$ 3,080,500,000	$ 5,270,900,000
Total	$ 444,300,000	$ 2,054,000,000	$ 5,825,300,000	$ 9,931,000,000
Employment - (Numbers)				
Direct	106	671	2,174	3,749
Total	2,045	10,507	29,697	50,542

Estimated Agricultural and Renewable Energy Economic Impacts

	2010	2015	2020	2025
Total Industry Output - (Dollars)				
Direct	$300,000,000	$1,322,100,000	$5,219,100,000	$11,041,200,000
Total	$542,800,000	$2,476,200,000	$8,799,800,000	$17,802,700,000
Employment - (Numbers)				
Direct	1,248	5,418	30,900	91,431
Total	3,579	17,581	68,788	161,982

2025 Quad Breakdown

Biofuels	0.29
Electricity from Biomass*	0.14
Wind	0.01
Solar	0
Total	**0.44**

quadrillion BTUs of energy

*includes electricity generated from crop and wood residues, dedicated energy crops, manure and methane

1. Data extracted from an economic analysis of a 25x'25 energy future conducted by economists at the University of Tennessee. A copy of this analysis, "25% Renewable Energy for the United States by 2025: Agricultural and Economic Impacts," is available at www.25x25.org

2. While the analysis includes forest waste from hazard-reduction programs and mill residue, it does not take into account woody biomass from standing timber, agricultural wastes (other than corn and wheat) and urban wood waste. Furthermore, while the analysis includes the production of dedicated energy crops, some varieties of feed stocks currently under research in laboratories and universities (energy cane, Miscanthus and hybrid willow, among others) may not be fully evaluated in this analysis.

3. Totals may not add up due to rounding.