

KY Freight Volume
Truck
Train
Barge



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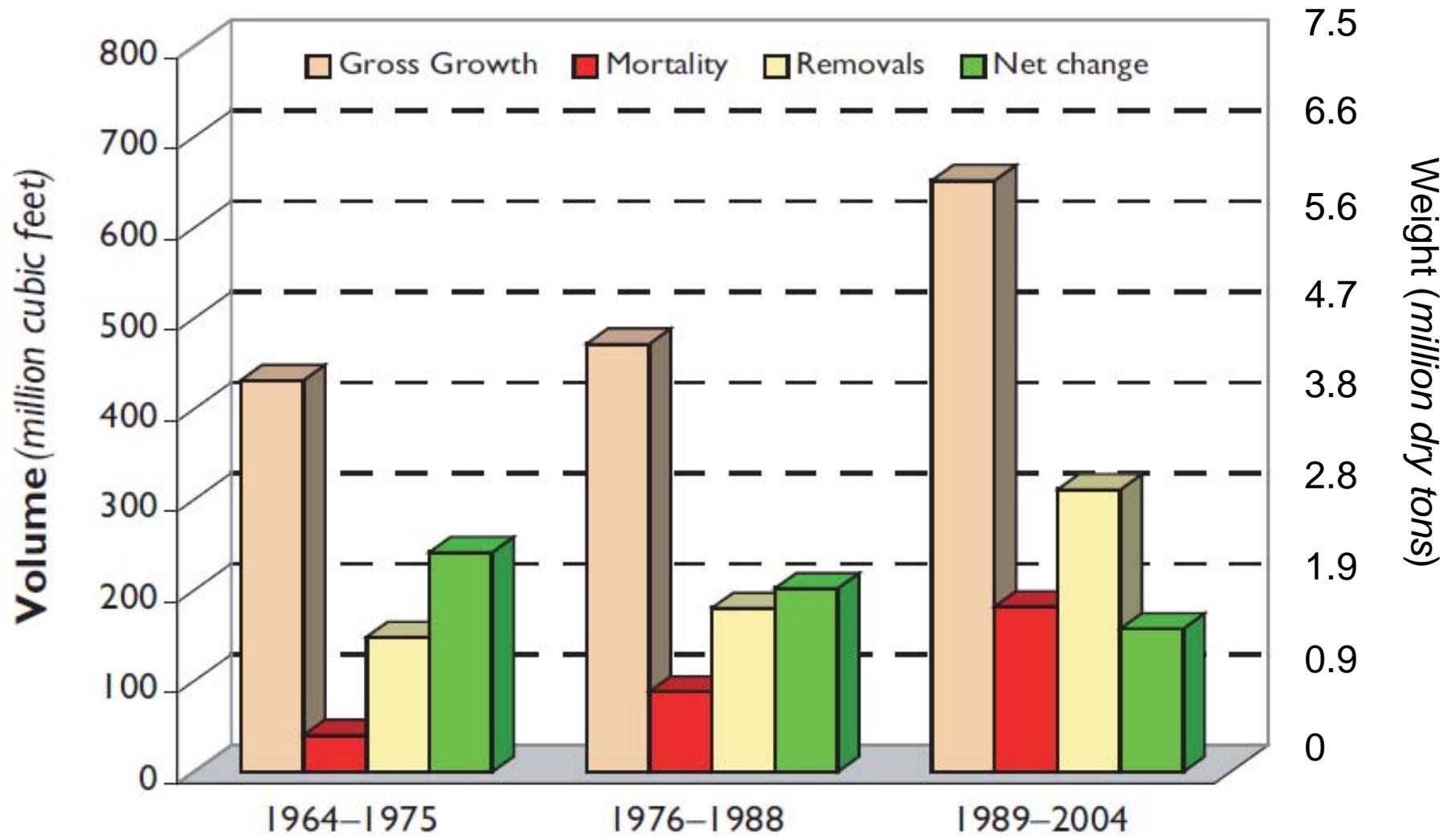
Learn more:

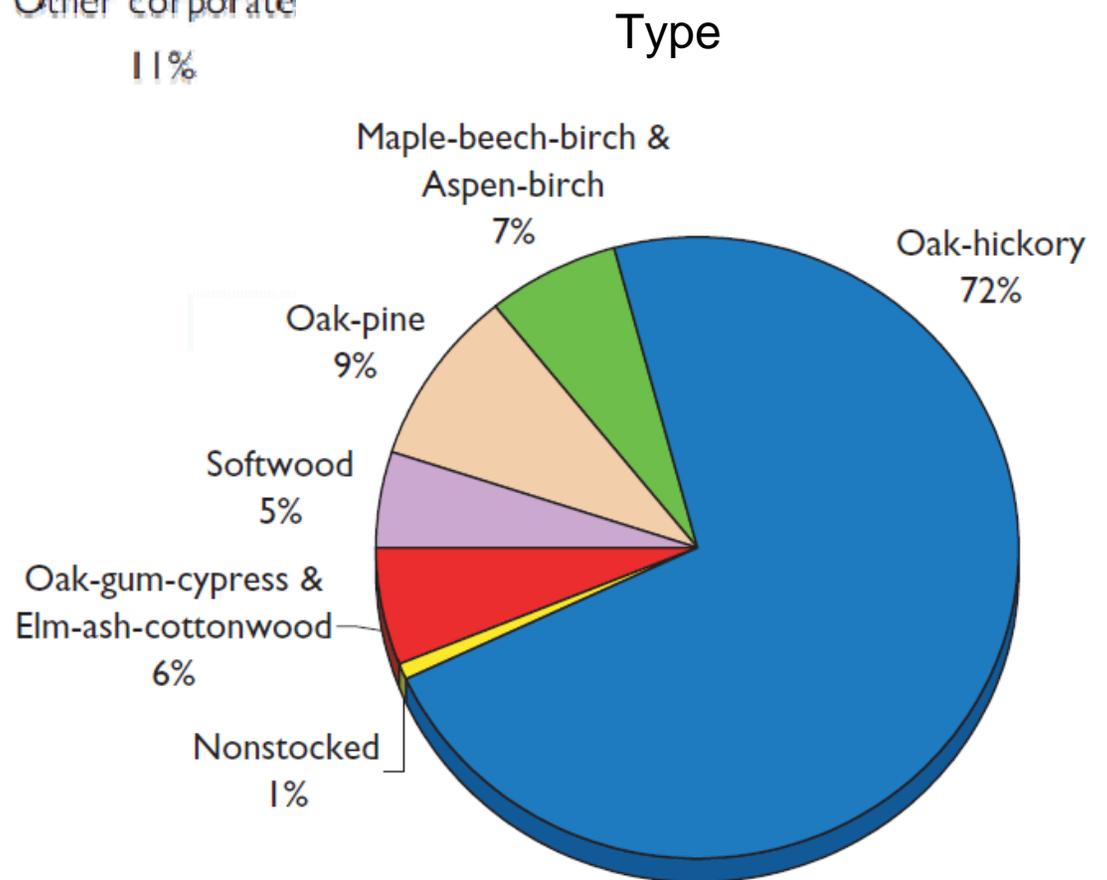
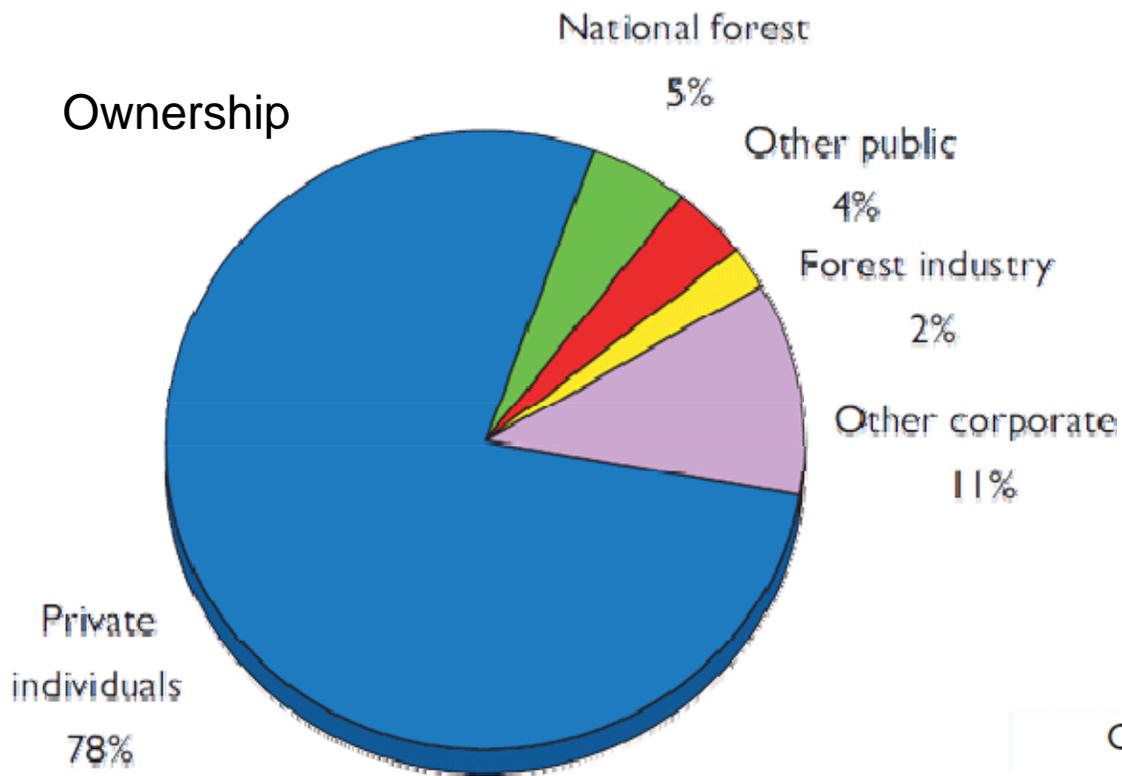
EnergyFarms.net
Organic.KYSU.edu

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- Joelle Johnson
- Brian Geier
- KSU Farm crew
- CASS program
- Post Carbon Institute

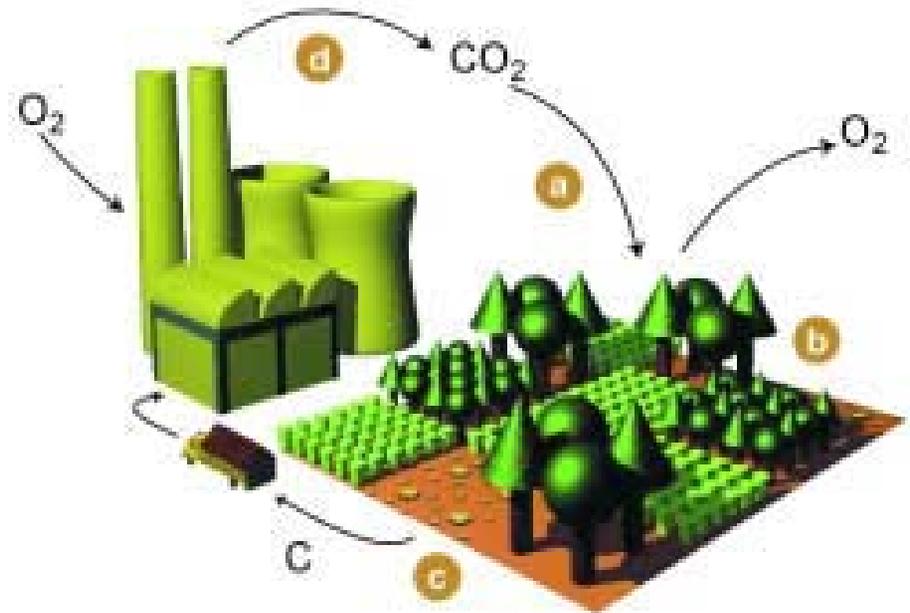
Average annual gross growth, removals, mortality, and net change of growing-stock trees on timberland



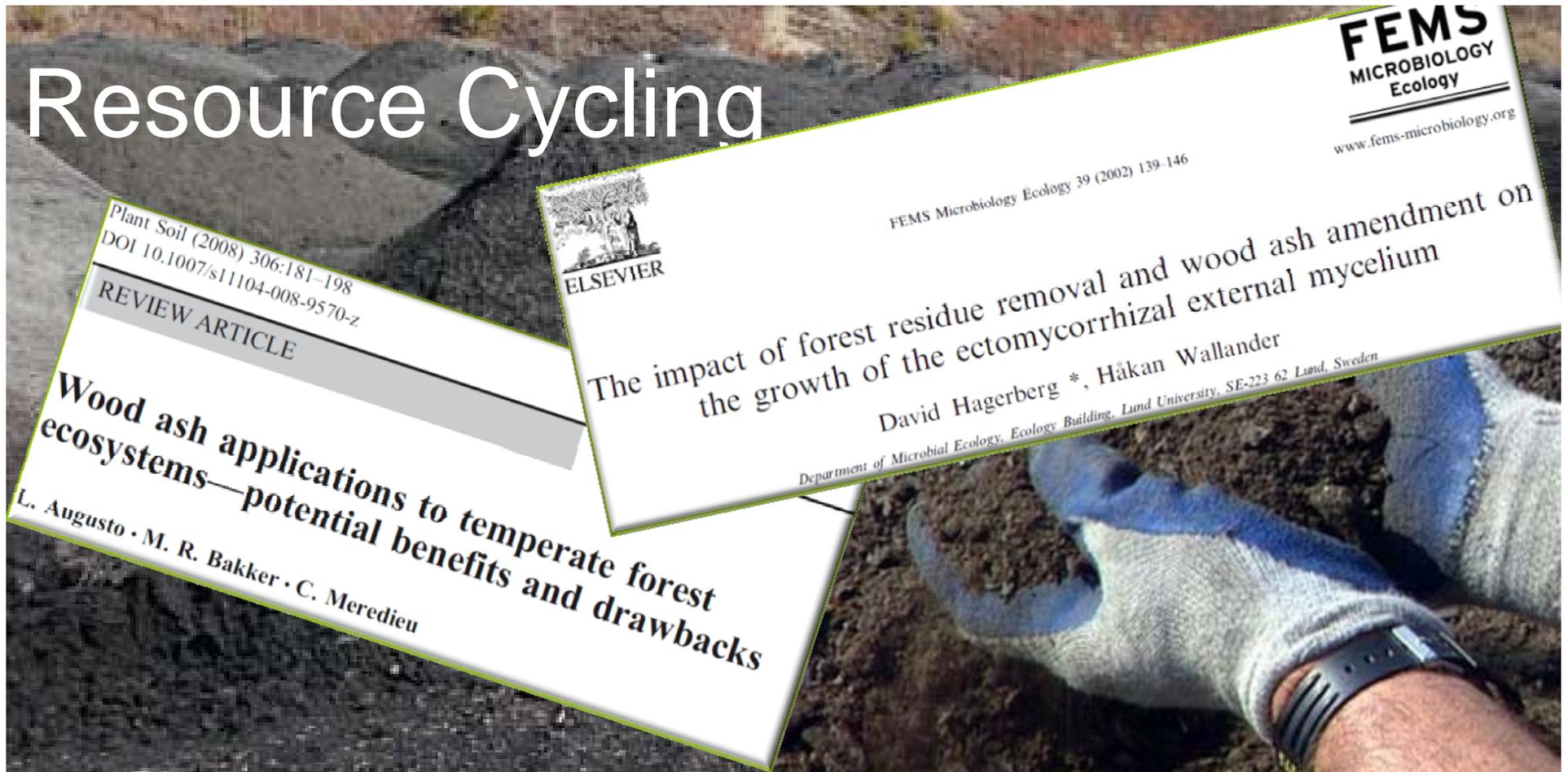


Kentucky has 12 million acres of forestland (47% of land cover)

Resource cycling

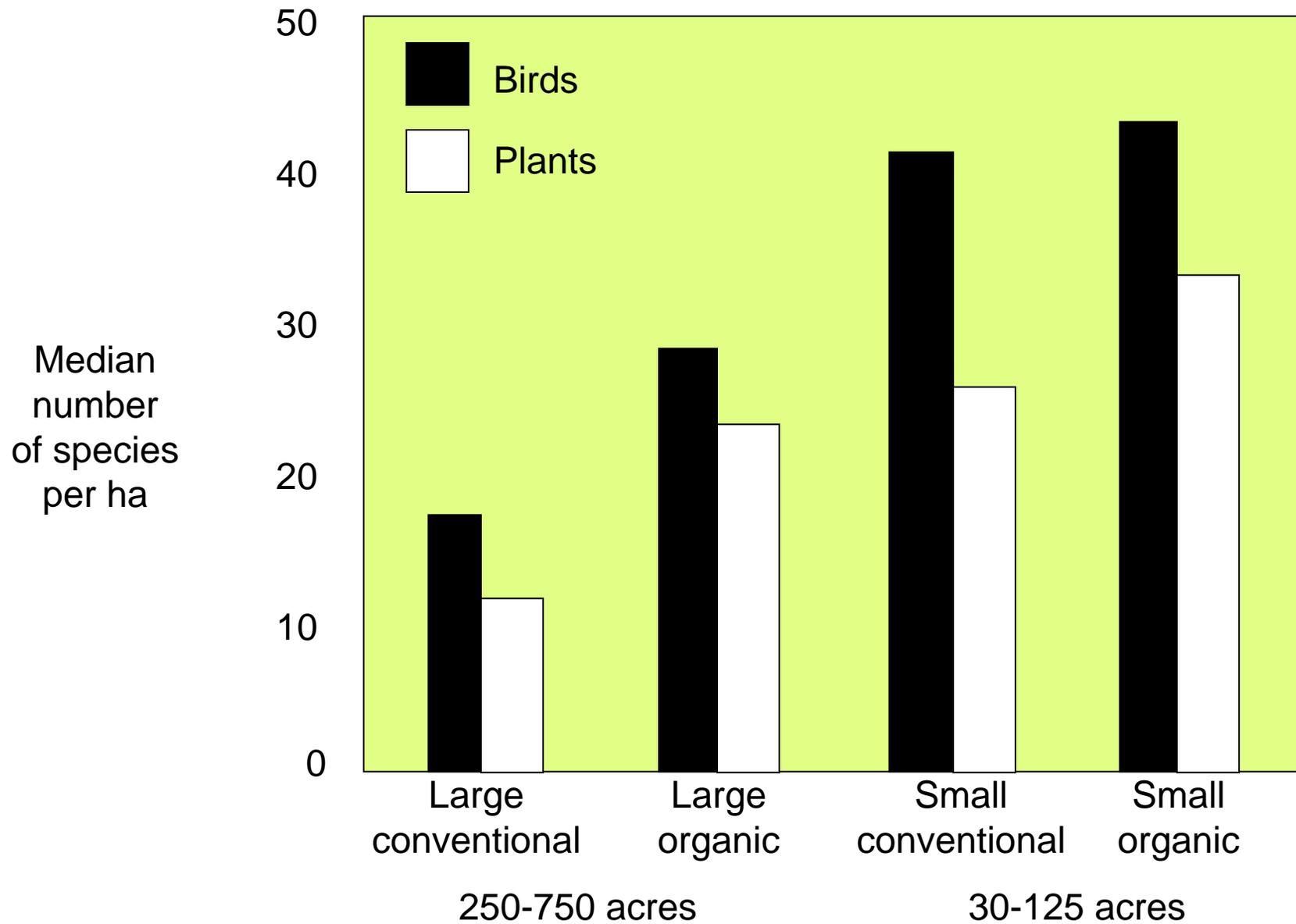


Resource Cycling

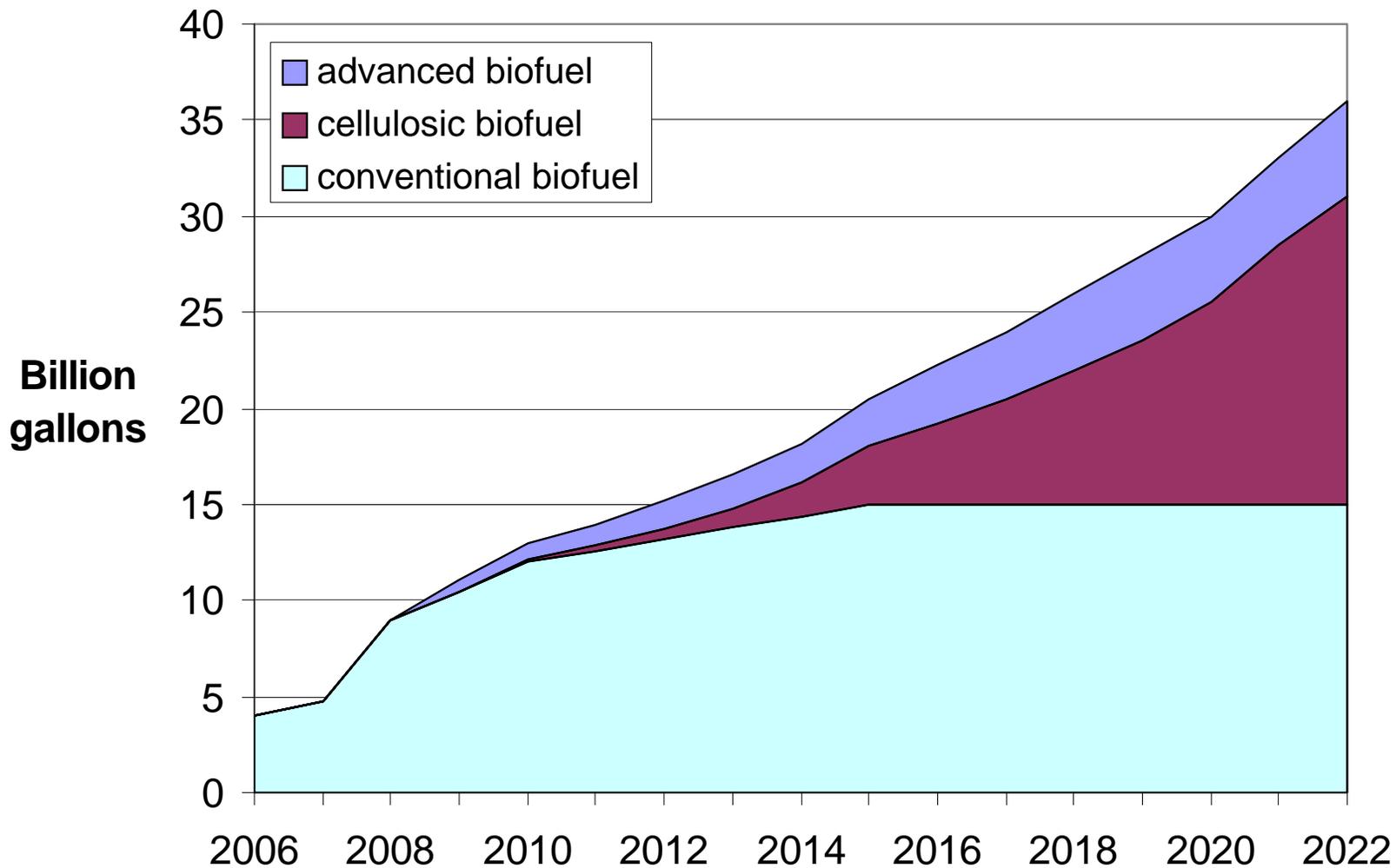


- Intensive harvesting of forest residues depletes soil organic matter and mineral content
- Wood ash return can help restore nutrients
- Best adapted to acidic soils

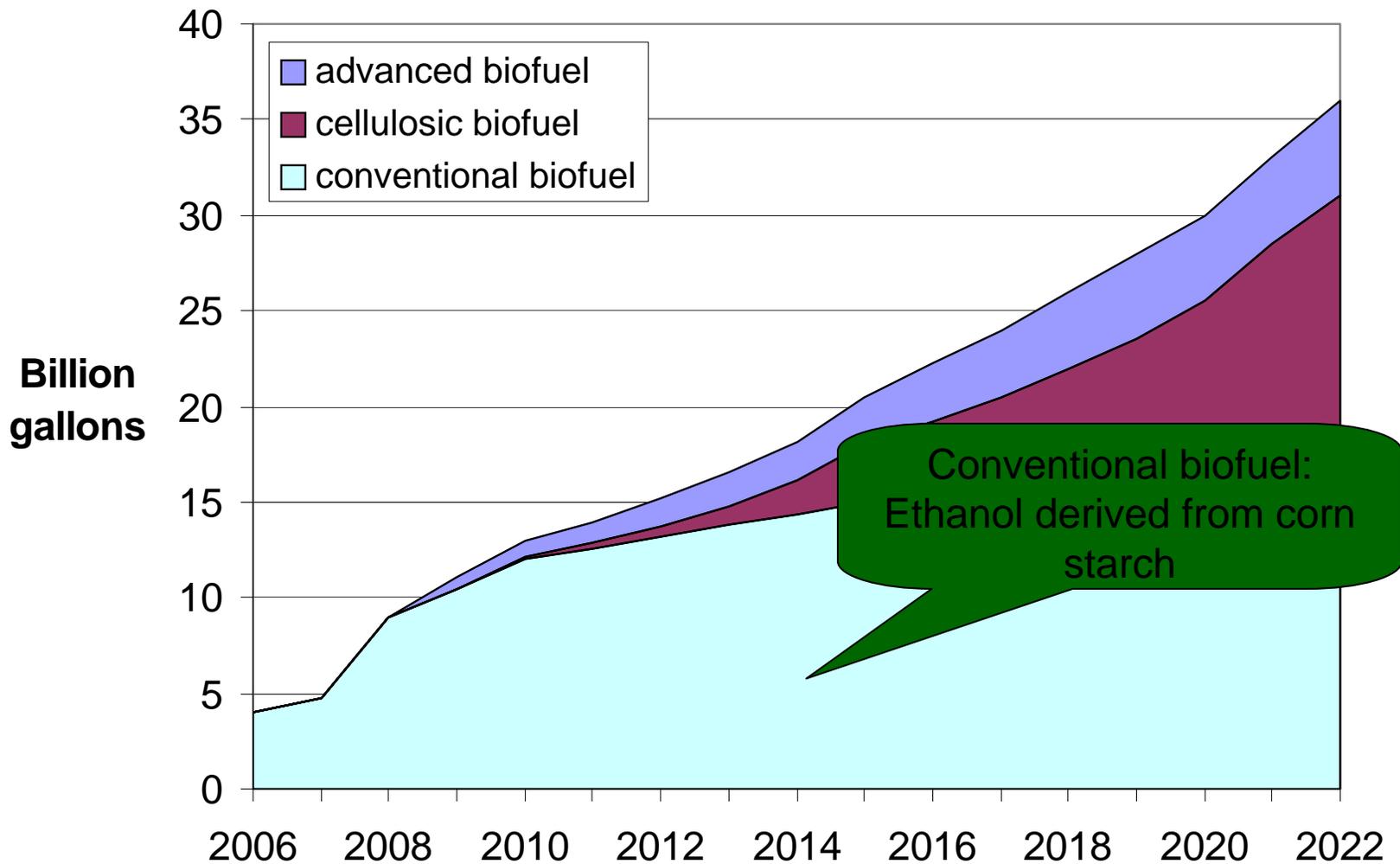




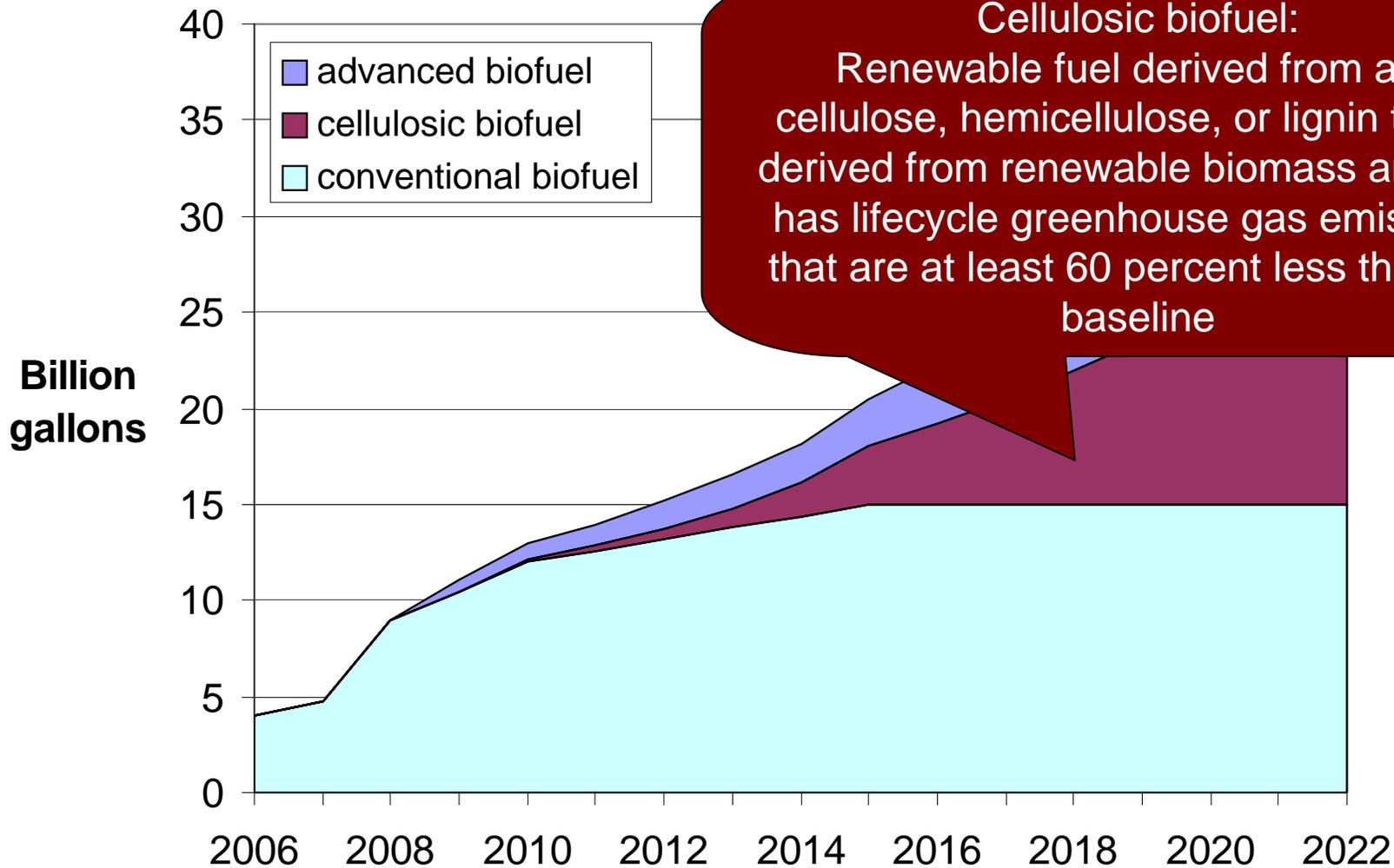
US Biofuel Mandates



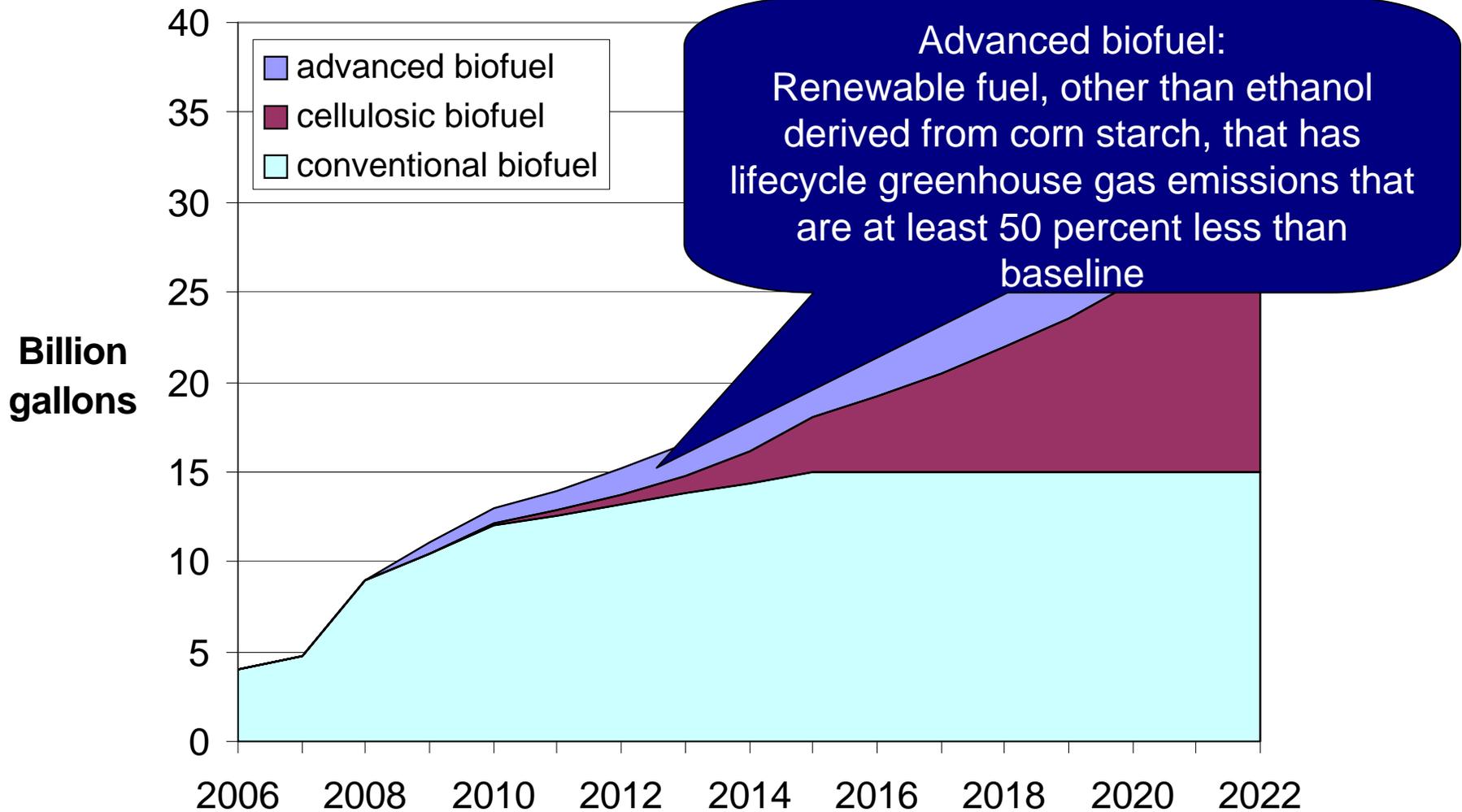
US Biofuel Mandates

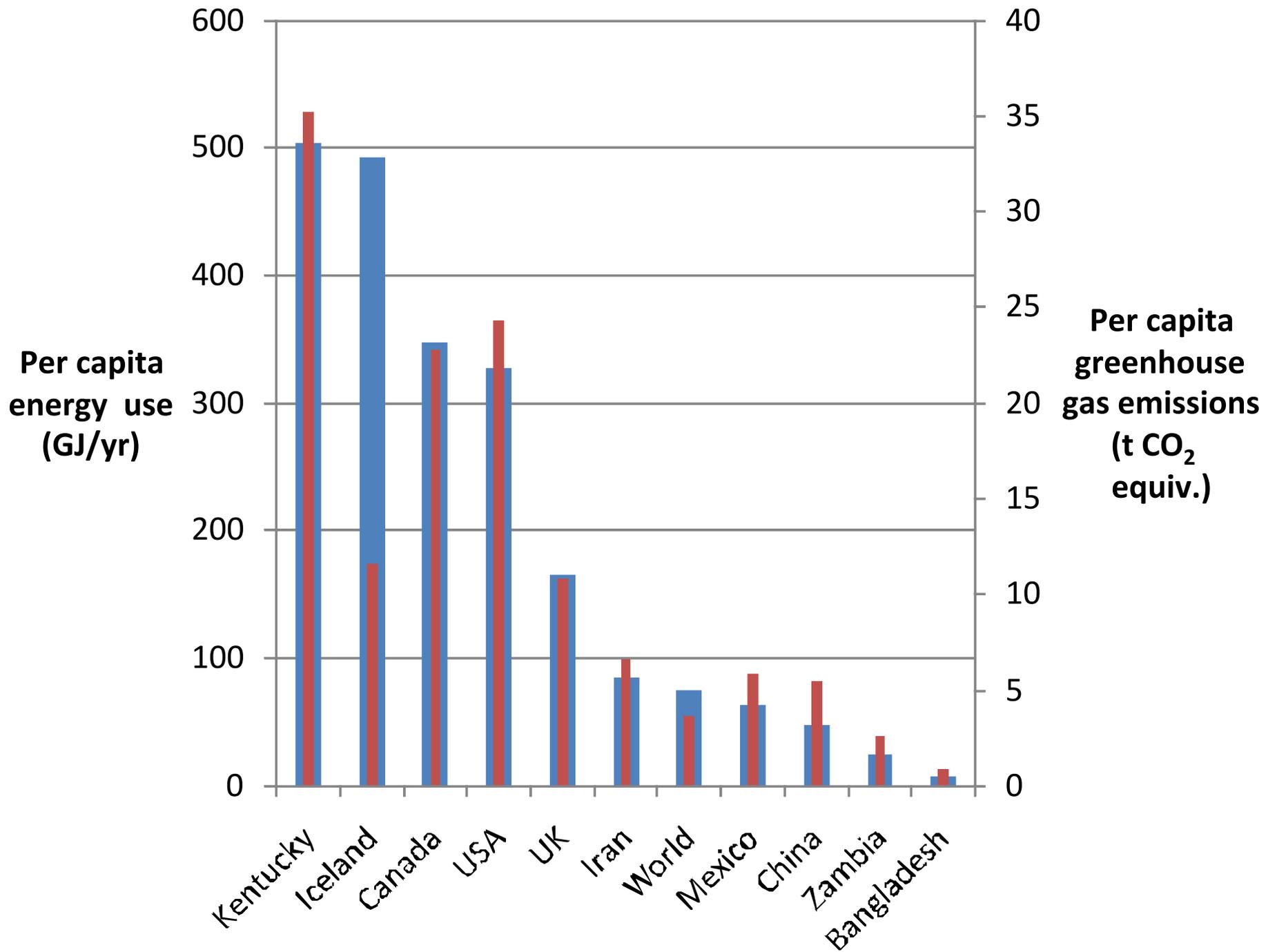


US Biofuel Mandates

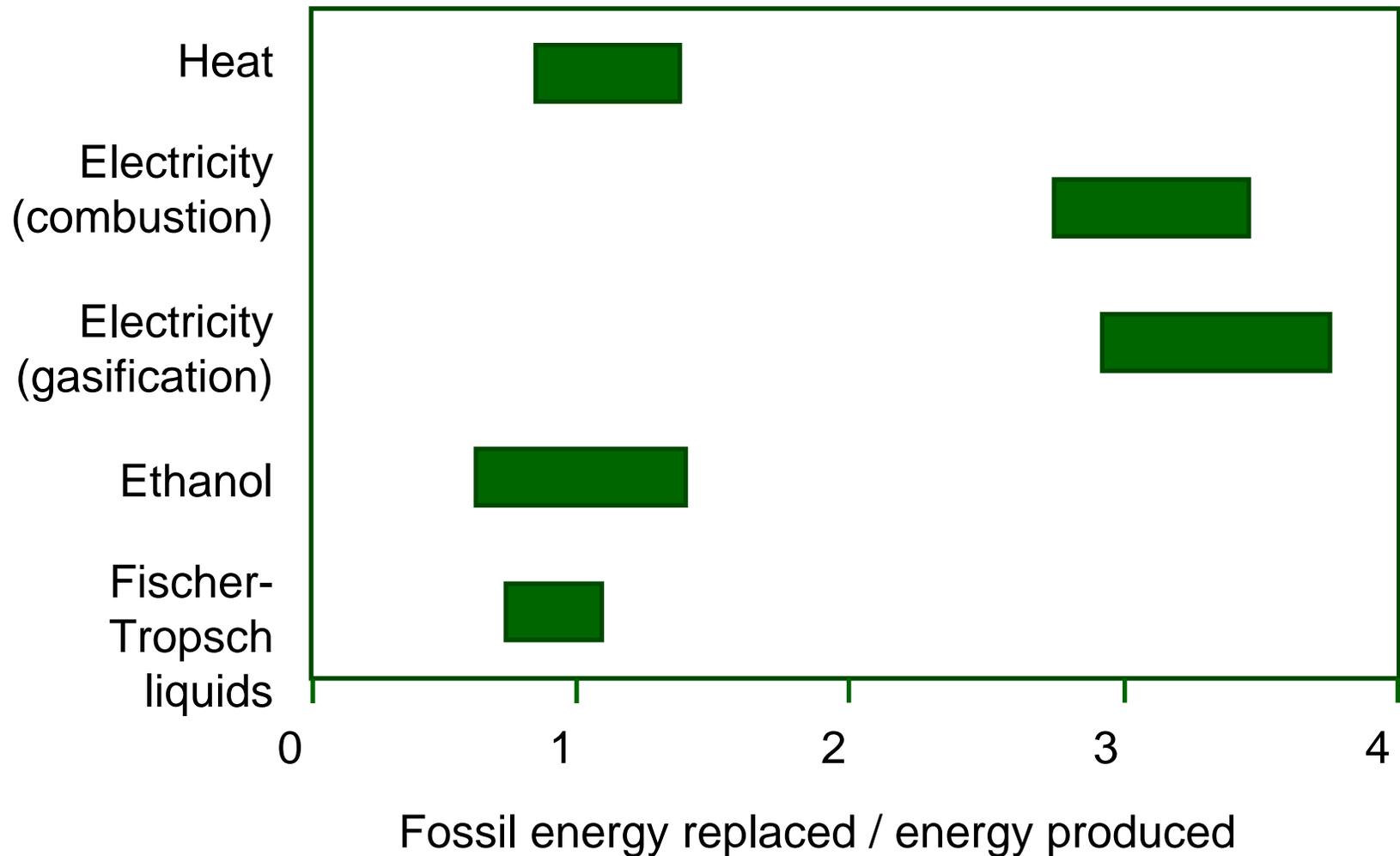


US Biofuel Mandates





Energy use efficiency



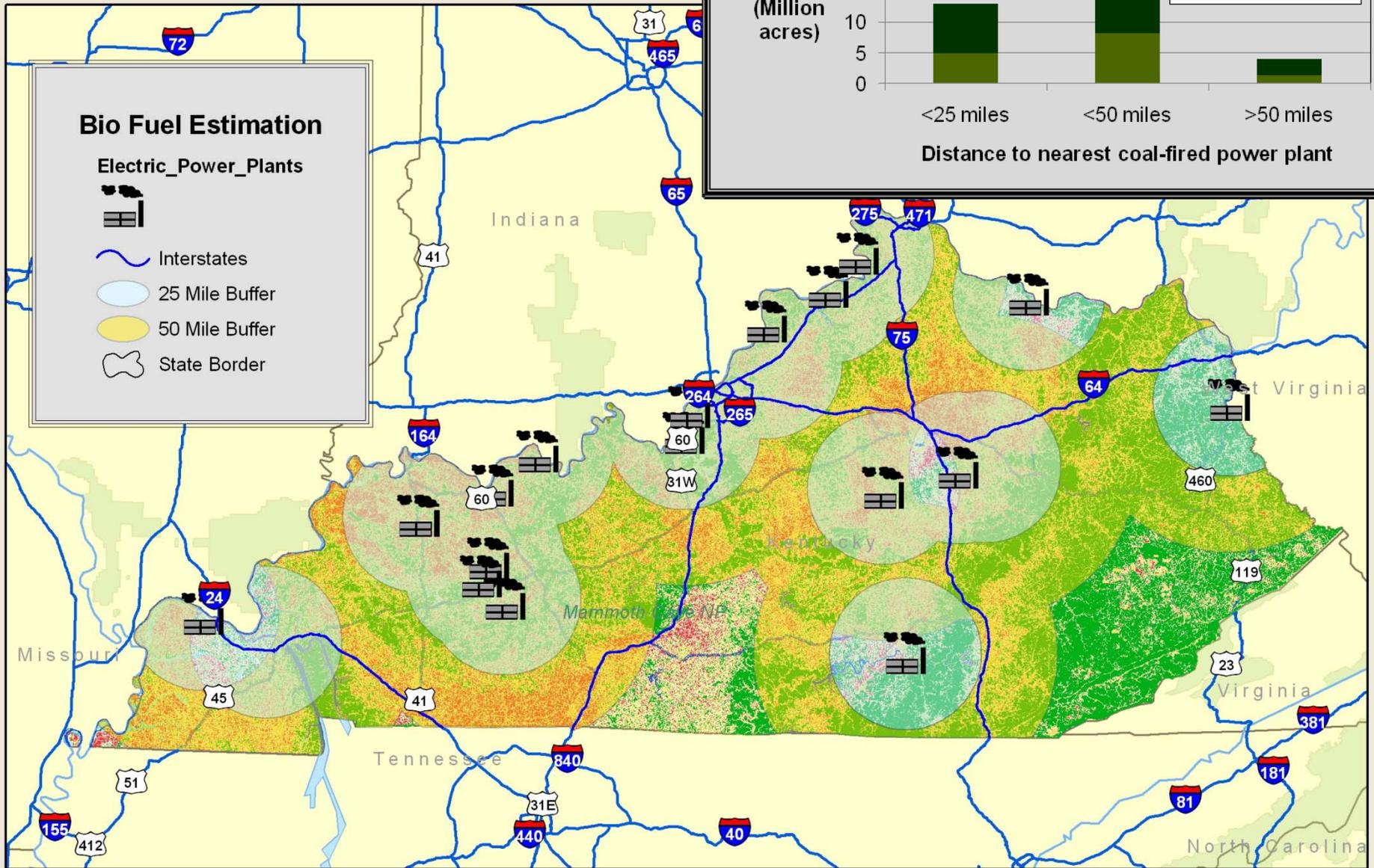
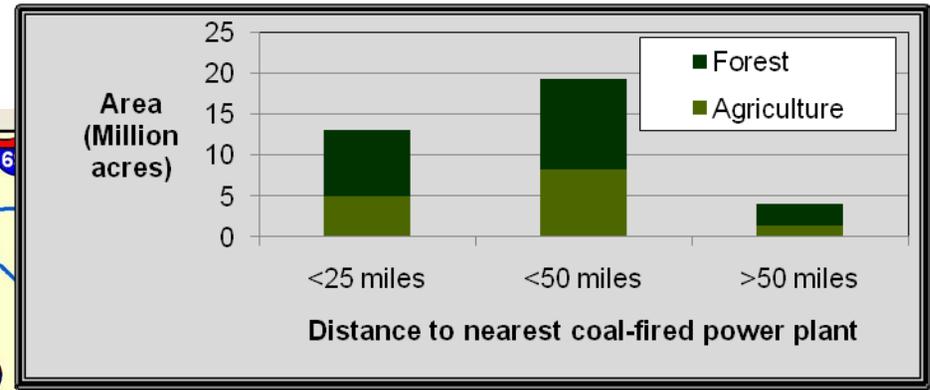
Zhang et al. 2009. A review of life cycle assessment studies on renewable energy derived from forest resources. In Solomon and Luzadis, *Renewable Energy from Forest Resources in the United States*. Routledge.

Bio Fuel Estimation

Electric_Power_Plants



- Interstates
- 25 Mile Buffer
- 50 Mile Buffer
- State Border





Active Rail Lines of Kentucky

Class I Railroads

- Burlington Northern Santa Fe Railway (BNSF) *
- Canadian Pacific Railway (CP) *
- CSX Transportation (CSXT) *
- Illinois Central Railroad (IC) *
- Norfolk Southern (NS) *

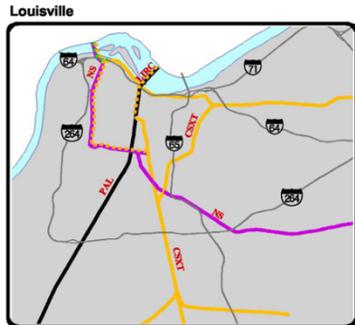
Class II Railroads

- Paducah and Louisville Railway (PAL)

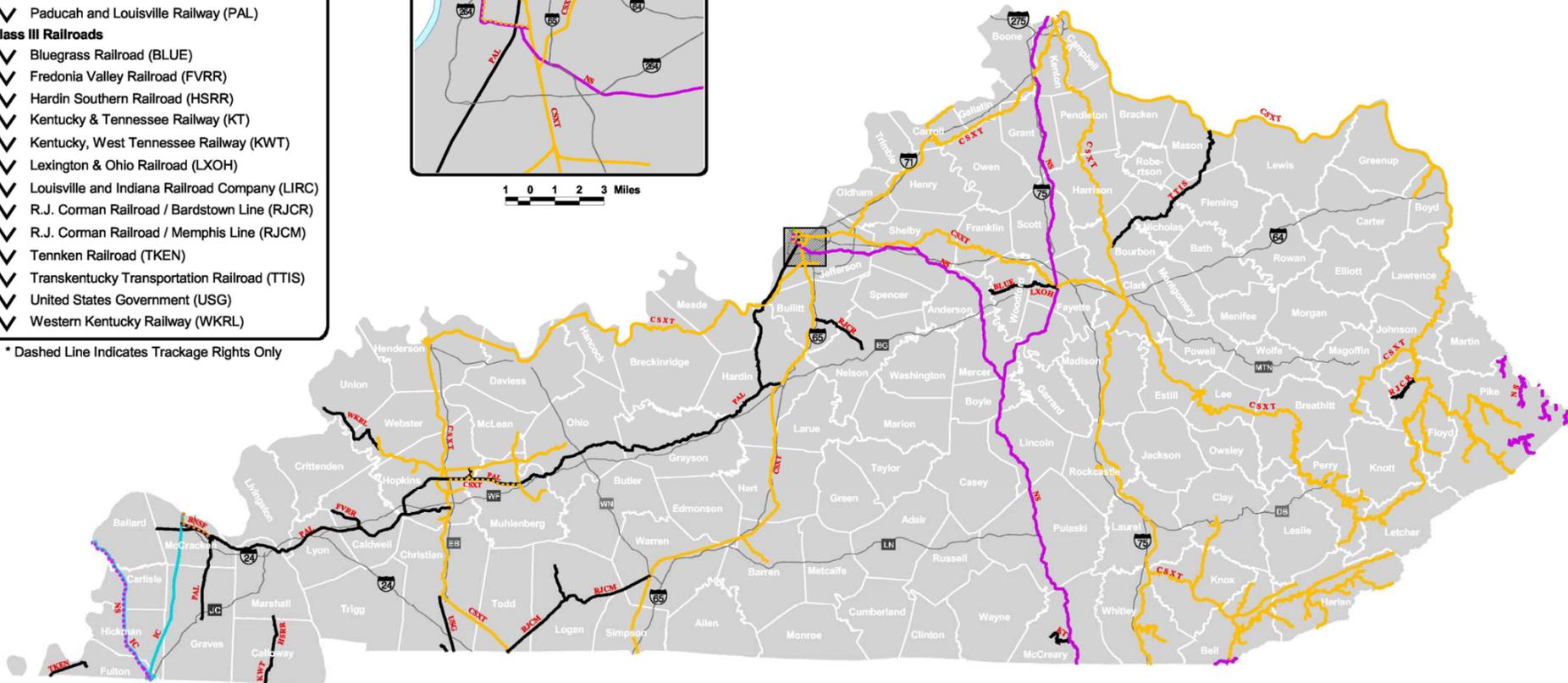
Class III Railroads

- Bluegrass Railroad (BLUE)
- Fredonia Valley Railroad (FVRR)
- Hardin Southern Railroad (HSRR)
- Kentucky & Tennessee Railway (KT)
- Kentucky, West Tennessee Railway (KWT)
- Lexington & Ohio Railroad (LXOH)
- Louisville and Indiana Railroad Company (LIRC)
- R.J. Corman Railroad / Bardstown Line (RJCR)
- R.J. Corman Railroad / Memphis Line (RJCM)
- Tennken Railroad (TKEN)
- Transkentucky Transportation Railroad (TTIS)
- United States Government (USG)
- Western Kentucky Railway (WKRL)

* Dashed Line Indicates Trackage Rights Only



1 0 1 2 3 Miles



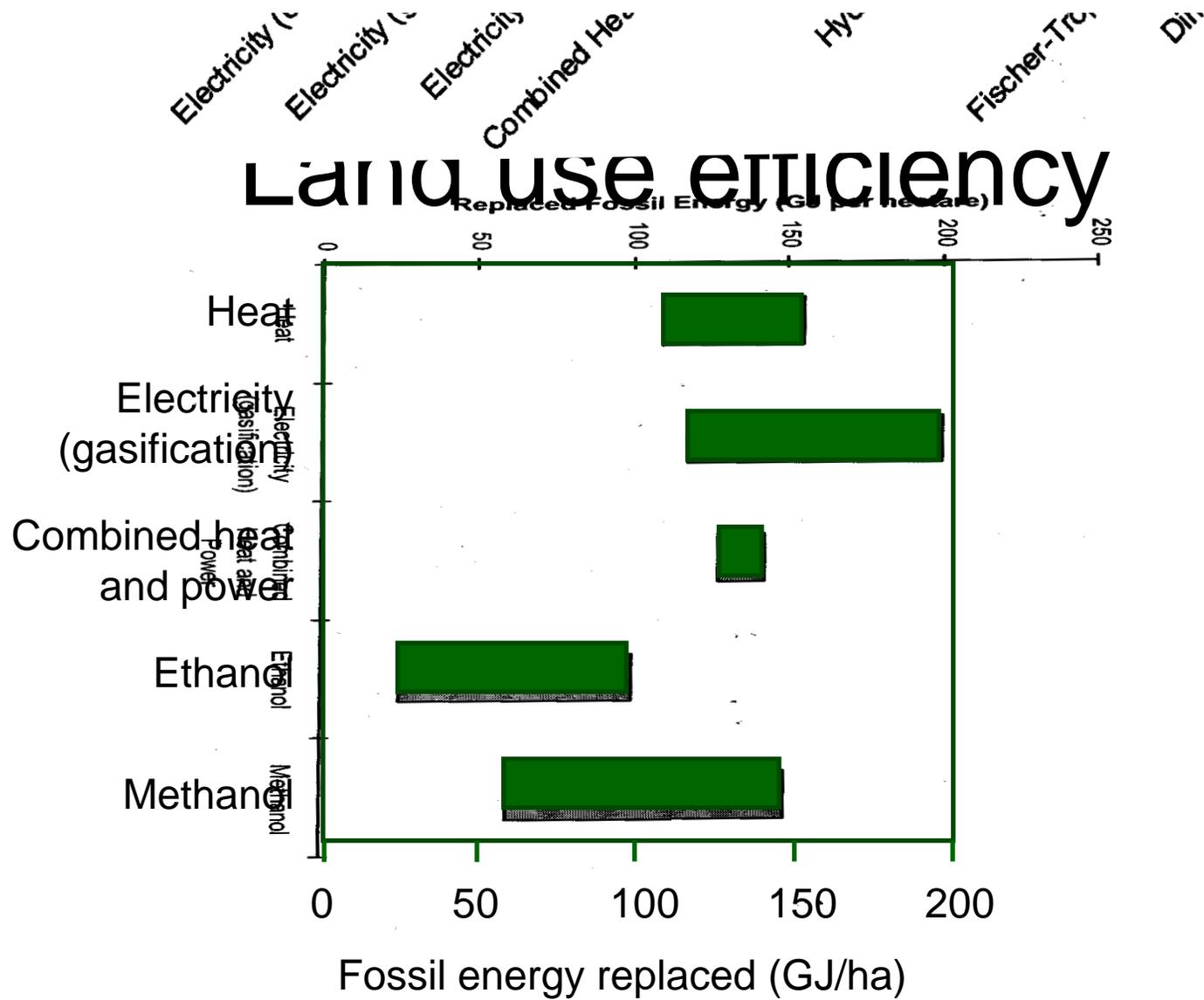
20 0 20 40 60 Miles



Source: Bureau of Transportation Statistics: 2000 National Transportation Atlas Database; Verified Using The Professional Railroad Atlas of North America, 2nd Edition, Railroad System Maps, and Railroad Internet Resources. Reviewed by Railroad Representatives and Other Project Stakeholders.

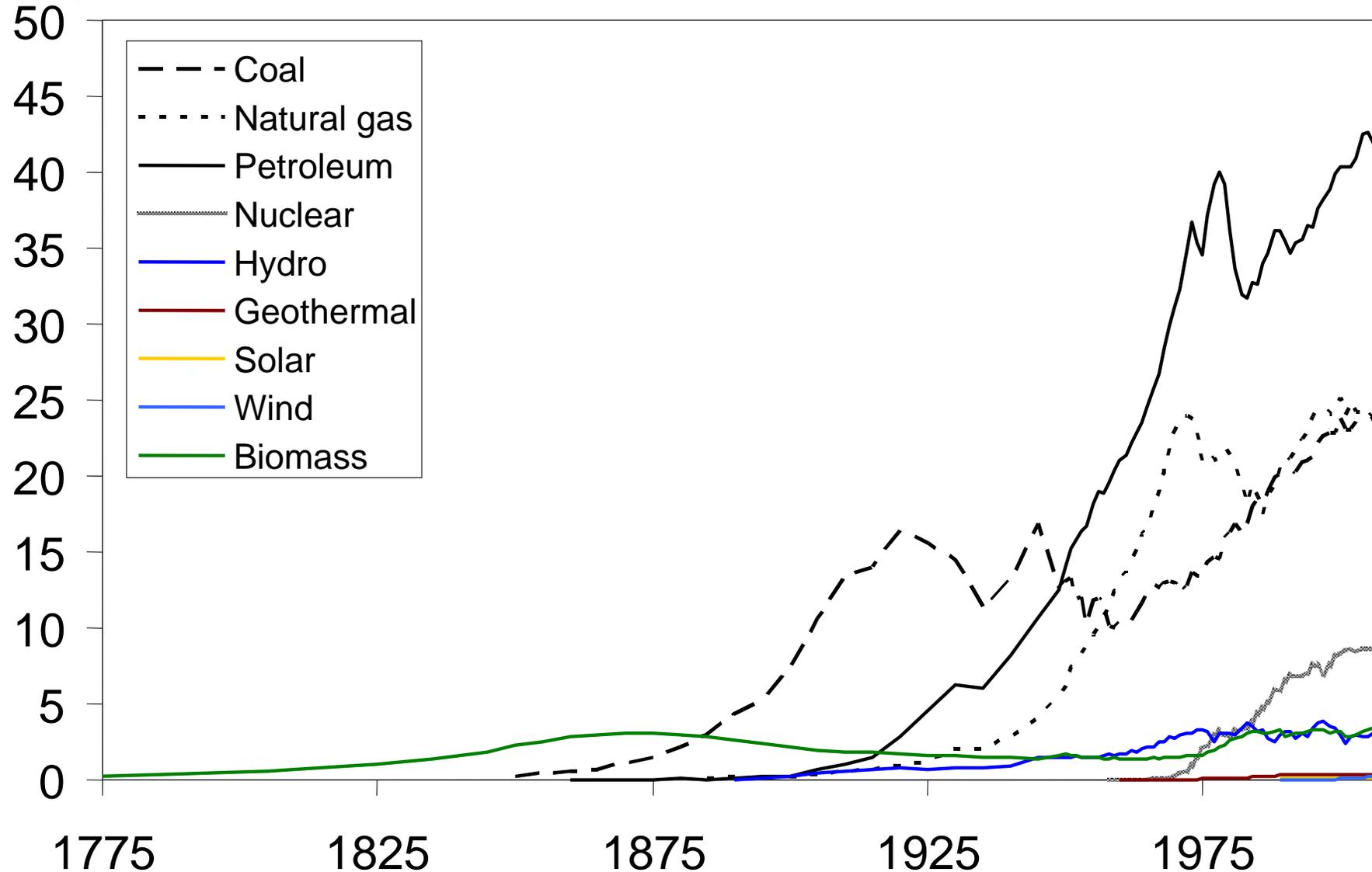
Figure 2-1
2002 Kentucky Railroad System
 2002 Kentucky Statewide Rail Plan

Land use efficiency

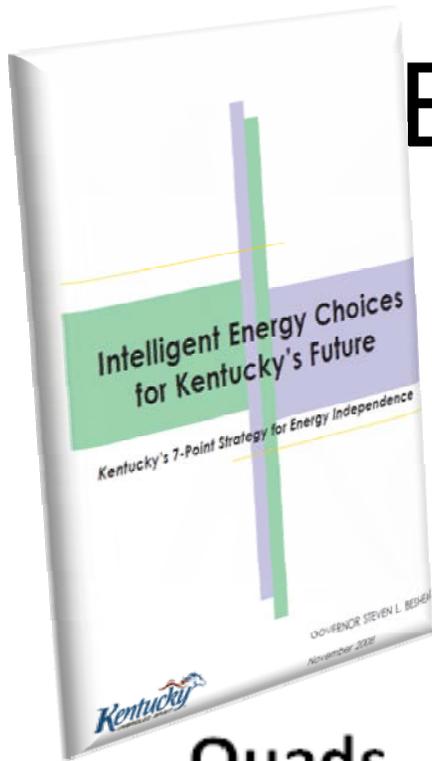


US Energy Consumption by Source, 1775-2006

Exajoules

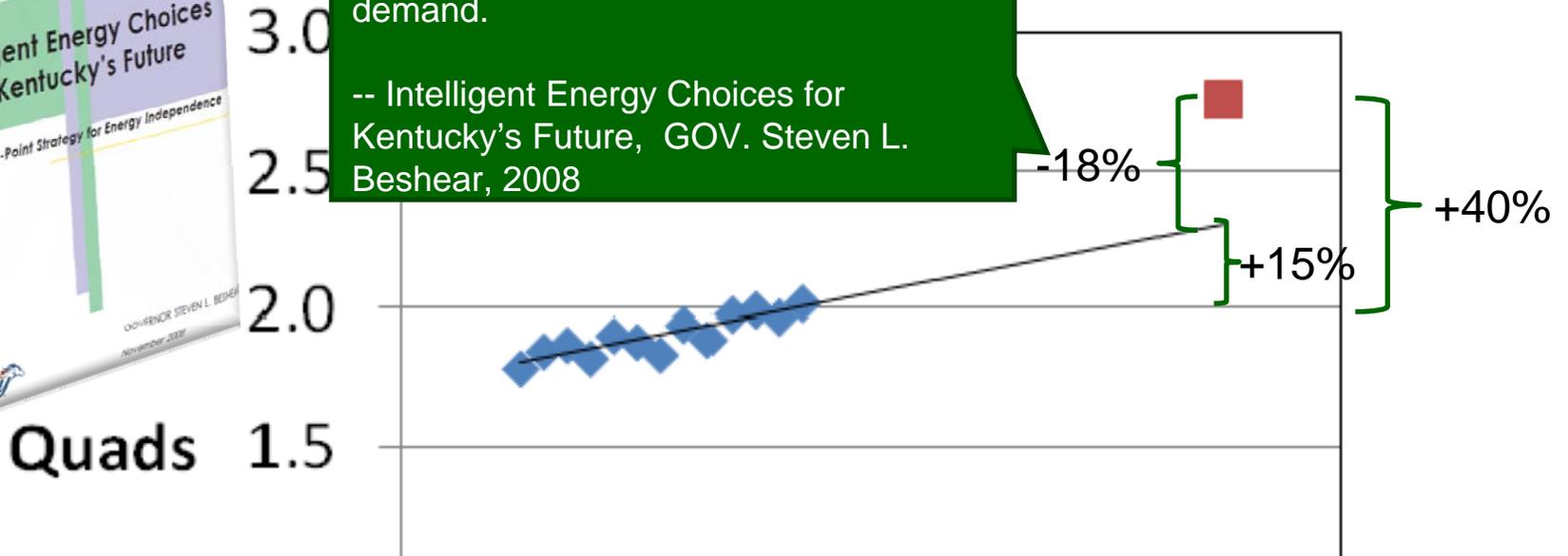


Energy Use, 1995-2007

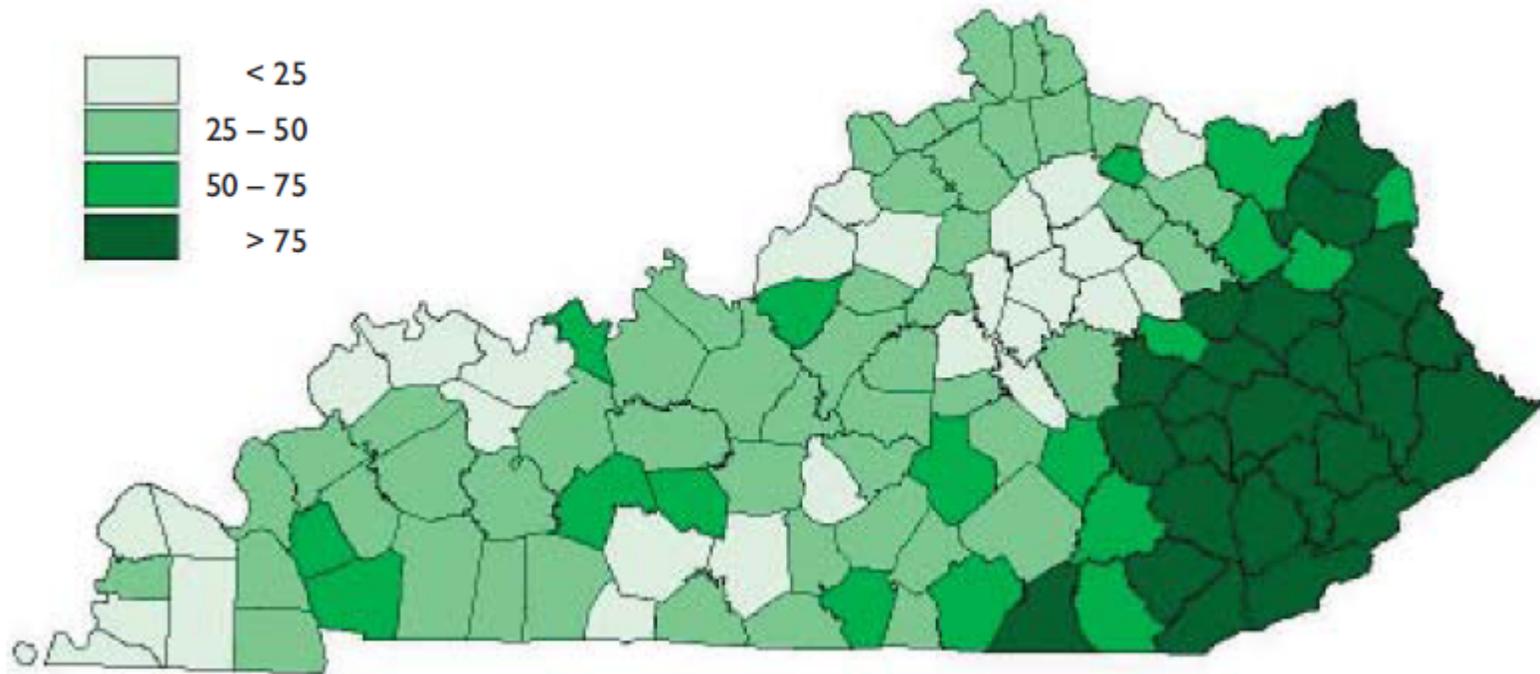


Energy Efficiency will offset at least 18% of Kentucky's projected 2025 energy demand.

-- Intelligent Energy Choices for Kentucky's Future, GOV. Steven L. Beshear, 2008



Percentage of land in forest by county



Down woody material (tons per acre)

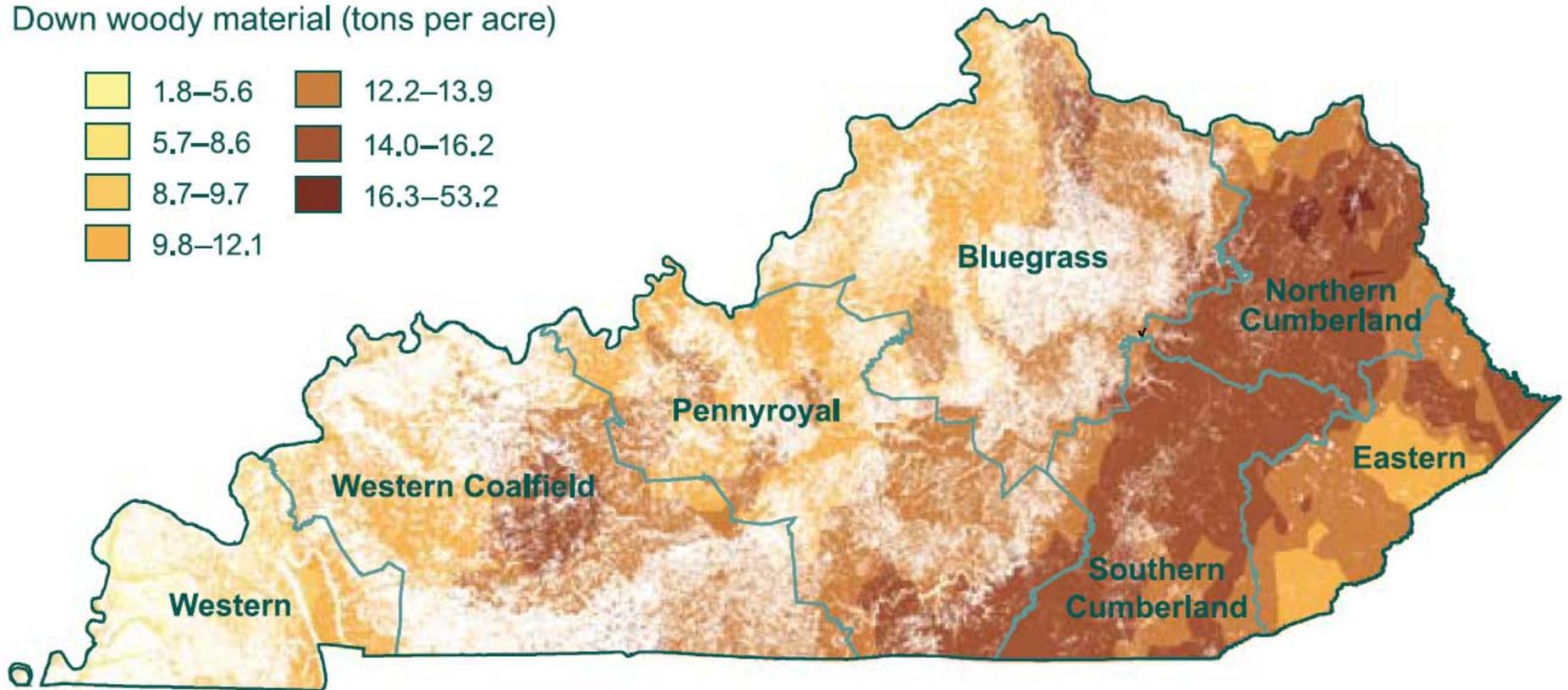
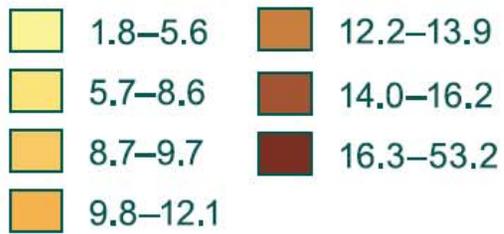


Figure 29—Kriged predictive map of down woody material by FIA reporting unit, Kentucky, nonforest areas have been removed.