



# Energy Security and the Bioeconomy









## Efficient Use of Inputs

## Production and Processing Technology



# Capacity there but

*reorientation*

Soil Organic Matter

Algology

Agricultural power and mechanization

More grain, less stalk

Grow food more efficiently on our best land

Increase the yield of commodity crops

Carbon footprints

Biomass from algae

Energy input costs

More cellulose, less grain

Utilize marginal lands for energy

Play catchup with new biomass species

