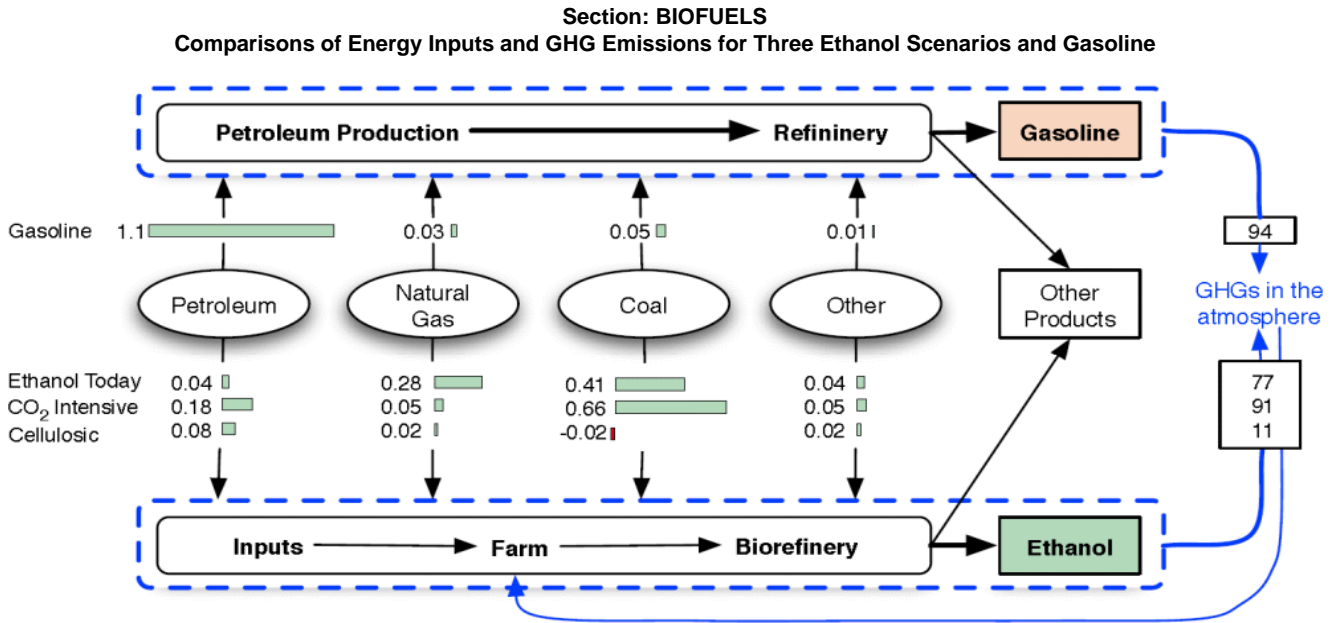


This graphic was developed by the Energy and Resources group at the University of California, Berkeley using their Biofuel Analysis MetaModel. It is comparing the intensity of primary energy inputs (MJ) per MJ of fuel produced (ethanol or gasoline) and of net greenhouse gas emissions (kg CO₂-equivalent) per MJ. For gasoline both petroleum feedstock and petroleum energy inputs are included. "Other" includes nuclear and hydroelectric generation. The Ethanol Today case includes typical values for the current U.S. corn ethanol industry. The CO₂ intensive case assumes the ethanol is produced in a lignite-fired biorefinery located far from where the corn is grown. The Cellulosic case assumes ethanol is produced from switchgrass grown locally. Cellulosic ethanol is expected to have an extremely low intensity for all fossil fuels and a very slightly negative coal intensity due to electricity sales that would displace coal.



Source:

A.E. Farrell, R.J. Plevin, B.T. Turner, A.D. Jones, M. O'Hare, and D.M. Kammen. Ethanol Can Contribute To Energy and Environmental Goals. *Science*, Vol 311, January 27, 2006.
<http://www.sciencemag.org/content/311/5760/506.full>