

AOSC 433/633 & CHEM 433/633 Atmospheric Chemistry and Climate

Admission Ticket, Lecture 21

Due: Thursday, 25 April 2013 (at start of class)

12 points

Your name: _____

a) (2 points) What is ethanol?

b) (2 points) How does the energy released by burning ethanol compare to that released when octane is burned?

c) (2 points) Why is the combustion of ethanol less efficient than the combustion of octane?

d) (2 points) Two U.S. Senators co-sponsored amendments to an Energy Bill passed in 2005 that increased the availability of fuels blended with 85% ethanol by providing a tax credit to filling stations that used E-85 fueling systems. Who were these Senators and why might they have led this particular effort?

e) (4 points) Professor McElroy has criticized the U.S. ethanol program in his article entitled "The Ethanol Illusion". Briefly (i.e., 2 to 4 sentences) summarize his criticisms.