

Professor calls biofuels solution poor energy return on investment

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To the editor:

Re: Fuelling change Part 1: Is ethanol the best answer to fuel crisis?

I commend your paper for covering the controversial issue of ethanol as a fuel.

What is usually left out of the debate is that the energy return on investment (EROI) of biofuels is somewhere in the range of 1:1 to 2:1 (at best), i.e. we are not able to get even two energy units out of the biofuels system for every energy unit we invest into it.

To put this into context, Saudi conventional oil started off at about 100:1, conventional oil these days is at about 15:1, and even the unsustainable Canadian tar sands operate somewhere in the neighbourhood of 4:1.

Some researchers suggest that the world's energy mix must operate at least above 5:1 for the world economy to function in its current form. We are moving rapidly toward that ratio and biofuels represent possibly the lowest EROI energy system we will ever consider. Therefore, even if we move toward cellulose-based biofuels which may not be in direct competition to food, it will be impossible to run such a system on a scale which is required to replace a significant portion of today's fossil fuel supply.

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