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**Community : forums : green****Power the American nation with waste food!**

A new study shows that the energy used to produce the food wasted by Americans is greater than the energy stored in the oil and gas reserves around US shores.

The situation is probably worse than the study suggests, since the only data available on wasted food was from 1995, when 27% of all food was wasted. Since then, food prices have fallen, and waste has probably increased.

*Michael Webber and Amanda Cuellar at the Center for International Energy and Environmental Policy at the University of Texas at Austin calculate that this is the equivalent of about 2150 trillion kilojoules lost each year.**That's more than could be gained from many popular strategies to improve energy efficiency. It is also more than projections for how much energy the US could produce by making ethanol biofuel from grains.*Obviously, Americans (and every other similarly-wasteful society - we're just as guilty in the UK) should be doing their level best to reduce their wasted food, but it also strikes me; *there is gold in them thar bins.*

Rather than persuade hundreds of millions of lazy "Westerners" to change their ways, why not exploit them? Why not make money off them (or at least, save your own energy costs)?

We already have [a bus driving around for free](#), and [a car running on garbage](#). Can you come up with a house-hold scale scheme?

Could you cut your energy bills to zero, just by collecting other people's garbage for them?

Could you set yourself up as a supplier of motor fuels (gasoline or diesel replacements? methane?)

Come on, iblers, do your thing!

[New Scientist article](#)[Oil data](#)[The study itself.](#)

(I have attached a PDF of the study, if you're interested.)

**waste food report.pdf** (608x801) 100 KB**Price of Oil to Skyrocket**

Small oil companies are getting ready to profit from the oil boom.

OilandEnergyInvestor.com/Oil\_Prices

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**FEATURED****Extravagant Couture Hats by Philip Treacy**

I was watching project runway last night and in a sneak peak for next weeks episode I saw that designer Phi...

**Giant Furniture**

Not content with regular furniture, artist Robert Therrien has created his own set of massive tables and ch...

**C.O.P. Suit: Personal Protest Wear**

Whoever does a DIY version first i will bake cookies, seriously: C.O.P Suit was inspired by the COP15 clim...

**Bamboo bikes Instructables in NYT!**

Hey! Bamboo bikes Instructables were mentioned in NYT! Check out their article! New York Times bamboo bi...

**Large Scale Plexiglas Photo Display**

Hundreds of picture frames in a family room is overwhelming and cluttered. Instead of having an individual...

**Huge Cat Couch**

Huge cat couch is huge. Gigantic, event! No info available about this one that I've been able to find, but i...

**Socially Responsible Textiles - Bagru Textiles**

One of my close friends from college , Jeremy Fritzhand, is spending a year in Bagru, India as a Union Coll...

**Harry Potter Whereabouts Clock**

A great Harry Potter project even non-fans will like. Ran across this while looking for interesting clock p...

**Mini Cannon!**

Yay! The mini cannon is back! Youtube user 43287633 (T. Shamir) has returned with more footage of destr...

**Dry Ice Air Freshener**

Michael Natkin writes a culinary blog Herbivoracious which includes hundreds of recipes for a vegetarian d...



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zenithworld.en.ec21.com/

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Author: **PRO Kiteman**  
Published: Jul 31, 2010

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**Dudely** says:

Aug 5, 2010. 6:29 PM

It's a little known fact that the carbon released and energy used to move around and process recyclables plus the carbon and energy you save from recycling something instead of making/smelting a new one leaves you with an equal or negative number in all but the case of aluminum cans and a couple others; I think paper was one, but only when you included/excluded certain numbers. I suspect (especially if done on too large a scale) food-into-energy would be the same. Food is a relatively poor store of energy since it contains more water than anything else. The energy cost to truck the food very well might exceed the energy contents of the food itself, depending on distance traveled and the efficiency of the process by which you extract the energy. After all, converting it into methane simply converts it into an easy-to-transport version, and the process by which that occurs is fairly inefficient. You'd get a much more efficient energy release by, say, burning it and using the heat to turn water to steam to turn a turbine (currently our most efficient carbon-neutral-or-better process). Or you could just use it to heat the place directly. Malls and restaurants would be the obvious choices for this kind of model, but it wouldn't really work anywhere else, like in a private home, since they don't produce enough wasted food to make a complex machine and system like that feasible. Just making the thing would mean your energy deficit for years! Suffice it to say that quoting a bare number like energy contents in wasted food hides both the true cost of the process to harness it and the true potential. I think we should continue doing exactly what we're doing. The food goes somewhere, right? A landfill. So just subsidize (or, hell, mandate) caps that trap the gases released by a landfill and burn them for energy. Many landfills already do this, as it's very cost-effective. After all, people really do waste a lot of food, and there are other things that get thrown out that rot too; basically anything made out of a plant. So good idea, but if it were that easy someone would already be making obscene amounts of money off of it ;).

[REPLY](#)



**PRO CameronSS** says:

Aug 1, 2010. 12:15 AM

I think it was in National Geographic a few years back...someone determined that the amount of food wasted in the US was enough to end world hunger.

14

[REPLY](#)



**Dudely** says:

Aug 5, 2010. 6:04 PM

Of course, the real problem is distribution and imbalanced production. Much of that food is wasted because no one buys it.

[REPLY](#)



**PRO Kryptonite** says:

Aug 1, 2010. 1:10 AM

Wasn't it that 10% of the population controlled 90% of it's wealth?

4

[REPLY](#)



**PRO CameronSS** says:

Aug 1, 2010. 1:33 AM

Is that mutually exclusive?

14

[REPLY](#)



**PRO Kiteman** (author) says:

Aug 1, 2010. 2:52 AM

Nope .

108

[REPLY](#)



**PRO EmmettO** says:

Aug 2, 2010. 7:41 PM

The food wasted in the US is baffling! My friend worked for a doughnut shop. At the end of the day they throw out all the doughnuts that were not sold. This was a small shop and they threw out several large garbage bags full every day. Mind you they're perfectly good. I asked that they give the doughnuts to a shelter or food pantry and they said it had something to do with "food safety law" and that they were not allowed to give them away. That's just one tiny example of the food that is wasted.

5

[REPLY](#)



**PRO lemonie** says:

Aug 1, 2010. 11:22 AM

I read this too. Unfortunately many people think they're the greatest Goddam-nation on the planet and they can do what the hell they like and stuff everyone else. After all it's these funny-foreigners that cause all the problems....

43

L

[REPLY](#)



**shmyt** says:

Aug 1, 2010. 9:38 PM

That's a little hateful don't you think? Foreigners don't cause all the problems and it depends where you're at to consider the problem makers foreigners. In their country maybe you and your race cause a lot of problems, just try not to be so absolute and try to be a little less judgemental, it's an article about recycling not an incitement to war.

[REPLY](#)



**mr.space** says:

Aug 2, 2010. 11:36 AM

he was doing an impression i do believe. incidentally as much as people want to save the planet, we will find alternatives, when we need to! its like resorting to using slingshots instead of tanks just because theres a limited number of tanks!

[REPLY](#)



**PRO Kiteman** (author) says:  
Satire, anybody?

Aug 2, 2010. 2:37 AM

108

[REPLY](#)



**rimar2000** says:

Aug 1, 2010. 8:09 AM

27

Someone said: "there are three sorts of lies: little lies, big lies, and statistics". I am too concerned with the prodigal uses of the so-called "first world" (not only USA!), but I think they are rapidly changing, thereby demonstrating its adaptability. That's very healthy, and gives hope that it will not need a global catastrophe for humanity begins to work with a little more respect for the environment. Conspiracy theories are very captivating, often malicious, but they sometimes have a positive side: they instill fear, and we know that "Fear is not stupid". Pardon if some parts of my text are not understandable, remember I speak Spanish...

[REPLY](#)



**\_soapy\_** says:

Aug 2, 2010. 11:52 AM

"Lies, damned lies, and statistics" is the phrase you were looking for, in English, at least. :-)

3

[REPLY](#)



**rimar2000** says:

Aug 2, 2010. 1:04 PM

Thanks, but the phrase I wanted to write in this case was precisely the one that I wrote. Perhaps the original has not been in English.

27

[REPLY](#)



**PRO Jayefuu** says:

Jul 31, 2010. 9:13 AM

25

When I lived in Guildford while at uni the council brought in a food recycling scheme. Each household got a 50cm high bin for outside and a small "kitchen caddy" to put their food scraps.

You really don't realise how much food is wasted when you throw it in the normal big rubbish bin, I was amazed how much we threw away when you seperated it. And the council the next year saved a ridiculous amount from going to landfill, it could instead be composted (i don't think they're capturing the gases for fuel... yet)

I think restaurants should be encouraged to split their food waste more.

[REPLY](#)



**PRO Kiteman** (author) says:

Jul 31, 2010. 9:19 AM

108

We have a "green" bin, mainly for garden waste, but they will take food as well (we have a caddy as well). That all goes to composting.

I wonder: what kind of bioreactor would be suitable to accept the broad range of stff that would end up in such a bin (from green branches to scraps of cooked meat)?

What would be the "best" end product to aim for? Methane? Methanol?

And what about the solid wastes? Fuel a power station? Pressed into blocks for home fires?

[REPLY](#)



**elmejor06** says:

Aug 1, 2010. 5:55 AM

Here in Germany every household has four seperate bins. One for paper, one for plastic and packing materials, one for bio waste like food and anything that goes into the compost and one for the rest. Each bin is picked up seperately and then processed the right way.

[REPLY](#)



**\_soapy\_** says:

Aug 2, 2010. 11:59 AM

In Preston, England, they got all worried about putting food into the composters, so they told us all to just throw it in the bin like normal. Some Health & Safety BS.

Bacteria can happily digest all this stuff, from crude oil through to soylent green. It is just trying to get useful energy out of it that is the hard part.

Some recent advances mean that getting actual electricity out may soon be possible. Gasification, fermenting, composting, etc. all get energy out, but how much is actually usefully available?

It's probably a lot more effective and efficient to simply show tips on the end of food programmes on the TV - 5 minutes covering how best to re-use any leftovers from what you just made!

[REPLY](#)



**PRO Tool Using Animal** says:

Aug 1, 2010. 6:12 PM

64

41 billion barrels of oil  
210 trillion cubic feet of natural gas

energy density

natural gas 39 MJ/m<sup>3</sup>  
oil 38 MJ/l

1 cubic foot = 0.0283168466 cubic meters  
1 oil barrels = 158.987295 liters

so for oil  
 $41 \times 159 \times 38 \times 10^9 \times 10^3$  KJ  
for Nat gas  
 $210 \times 0.028316 \times 39 \times 10^{12} \times 10^3$  KJ

total  
 $247722 \times 10^{12}$  KJ for oil +  $229000 \times 10^{12}$  KJ for Nat gas

Versus

$2150 \times 10^{12}$  KJ

Someone check my math, I left my Ti92 in the car,

[REPLY](#)



**PRO PKM** says:

Aug 2, 2010, 7:27 AM

See my comment re: energy vs. power elsewhere. Your calculations look right for oil/gas, the end numbers also seem to stack up. That means there is ~100 years worth of food wastage in oil and a similar amount of gas.

15

I suspect the article means they could be tapped at a rate of approximately 200 trillion kJ per year, or the country could save 200 trillion kJ per year in efficiency improvements.

Correct me if I'm wrong, but

The United States... using 100 quadrillion BTUs (105 exajoules) in 2005  
annual world energy consumption is about 500 EJ

[source](#)

2,150,000,000,000,000 kilojoules  
2,150,000,000,000 megajoules  
2,150,000,000 gigajoules  
2,150,000 terajoules  
2,150 petajoules  
2.15 exajoules

... so the food wastage is about 2% of total (as per 2005) energy consumption, or about 0.5% of world energy consumption.

Note that the article says

this is the equivalent of about 2150 trillion kilojoules lost each year.

but it doesn't mention whether that is the energy contained in the food or the energy used to produce it.

Either way... organic waste?

[Gasifier!](#)

[REPLY](#)



**PRO PKM** says:

Aug 1, 2010, 5:56 AM

<brief rant about quantity and dimensional analysis>

the energy used to produce the food wasted by Americans is greater than the energy stored in the oil and gas reserves around US shores.

15

One of those is a [rate/i], the other is a [quantity/i]- energy per year is power (kJ/yr), energy stored is energy (kJ).

The quote makes it more clear- the amount of food energy wasted per year is more than the potential gain in available energy per year from efficiency schemes, or the potential production rate of corn-derived bioethanol.

By the oil and gas reserves comment did you mean the potential yearly energy output if those reserves were drilled?

</rant>

Sorry to rant about this so much but it gets to me when reporting on energy issues confuses energy and power.

[REPLY](#)



**fozyy13** says:

Jul 31, 2010, 9:05 PM

Thanks for the post this is awesome! I've been thinking about this a bunch, especially since I've started working at a restaurant..

9

[REPLY](#)



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