Welcome to **E1119: Green Tech, Blue Skies: the Sustainable Energy Revolution!!**

Our names are Kristi Bohl and Sean Posada, and we’re super-excited to meet you and share our passion about green energy!

There are four main things you’ll find in this message:

* Our **bios**, so you can get to know us better
* An **outline** of our lesson plan, so we’re ready to hit the ground running next weekend
* **Instructions** for making a solar oven that you should review before class (we have our fingers crossed that this can be an in-class, hands-on activity!)
* **Further resources**, opportunities, and mailing lists in case you’re interested in green tech

In the meantime, don’t hesitate to contact us with any questions, concerns, or comments you might have. We’re stoked to get to know you and get you excited about sustainable energy, so let us know how we can best make that happen!

To infinity and beyond,

Kristi & Sean

**About Us**

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| C:\Users\Kristi\Pictures\Stanford '09-'10\Summer 2010\Presidential Scholars\Pics for FB\IMG_1333.JPG | **Kristi**  My name is Kristi Bohl and I’m a sophomore majoring in Electrical Engineering at Stanford University. I’m really fascinated by renewable energy sources that take advantage of natural processes, and I’m especially interested in solar power. Outside of class, I’m very involved in the [Stanford Solar Car Project](http://solarcar.stanford.edu/), tour guiding, writing for [*The Unofficial Stanford Blog*](http://tusb.stanford.edu/), and [InterVarsity Christian Fellowship](http://www.ivstanford.org/). I also do solar energy research for the [PETE Group](http://www.stanforddaily.com/2010/08/12/pete-could-improve-solar-tech/) that’s working on a hybrid of photovoltaic and solar thermal cells: I’m growing silicon nanowires which we hope to use as a cathode material for our high-efficiency devices. In my spare time, I love playing sand volleyball, watching movies, and spending time with friends. |

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| C:\Users\Kristi\Pictures\Stanford '10-'11\Autumn Quarter\USC weekend\For FB\IMG_2284.JPG | **Sean**  My name is Sean Posada and I too am a sophomore. I am double majoring in [Science, Technology and Society (STS)](http://sts.stanford.edu/) and Sociology. My interest for renewable energy takes place in the ethical, cultural, economic and sociological impacts on the world. My concerns are not only in saving the planet and creating safe, stable nuclear energy facilities, but also in bringing together a common understanding of the need for change. I'm involved with the Catholic community at Stanford, [Circle K](http://www.stanford.edu/group/circle-k/cgi-bin/index.php), the [Stanford Store](http://store.stanford.edu/storefront/home.aspx), Stanford Libraries, the satirical [*Stanford Flipside*](http://stanfordflipside.com/), and something stupendously fun which I cannot disclose in this tiny email right now. I love philosophy, especially metaphysics, social theory, psychology, *The Matrix* and *Batman*. In my spare time I like to longboard, play video games, watch and play football, and chill. Stanford ftw, 'Nuff said. |

**Class Outline**

1. **Intro**:

Why should I care?

1. **Sustainable Energy Sources**:

We’ll compare these four sources on the basis of technology / infrastructure, source availability, cost, and potential negative externalities.

* 1. **Solar**
  2. **Biofuel**
  3. **Wind**
  4. **Nuclear**

1. **Solar Oven Demo**
   1. (if time) Solar Oven Construction!

**How to Make a Solar Oven**

1. Find an appropriate size cardboard box for your solar oven – 12” cubes are about right.
2. *Optional step (we won’t have time in class, but if you want to try it at home): roll newspaper sheets into loose rolls, then line the box with these rolls like they’re insulation.*
3. Line the bottom of the inside of the box with black construction paper to absorb heat.
4. Line the sides of the inside of the box and the flaps of the box with aluminum foil.
5. Use tape as necessary to hold the outer flaps out as wing reflectors (to reflect light into the box).
6. Place food to be cooked in the bottom of the solar oven.
7. Cover the top of the box with plastic wrap to retain heat. (Avoid wrinkling the wrap as much as possible; you want high light transmission.)
8. Face the oven into the sun, and cook some yummy food using only the power of the sun!

Read more: [How to Make a Solar Oven | eHow.com](http://www.ehow.com/how_2083_make-solar-oven.html#ixzz14G9TplLj)

Or check out a video at: [YouTube](http://www.youtube.com/watch?v=Jf26YBmY8Q8)

**Awesome Resources**

Here are some particularly useful websites and articles we’ve collected about renewable energy, which we hope will pique your interest in preparation for our class!

* [TIME Magazine article on renewable energy in the Recovery Act](http://www.time.com/time/nation/article/0,8599,2013683,00.html)
* [Energy Efficiency and Renewable Energy, Department of Energy](http://www.eere.energy.gov/): you can sign up for any number of email update systems under “Get Updates by Email” to keep posted on national energy developments
* [National Renewable Energy Laboratory](http://www.nrel.gov/): where lots of cutting edge technologies are under development
* [Energy Information Administration](http://www.eia.doe.gov/): where you can do side-by-side comparisons of renewable energy sources based on a variety of criteria
* [Students for a Sustainable Stanford](http://sustainability.stanford.edu/cgi-bin/index.php): in case you’re interested in what’s going on here on The Farm!
* If you have the chance, we’ve also uploaded a couple of Kristi’s past in-class renewable energy Powerpoint presentations that give detailed background on America’s solar resources as well as the fruition of Stanford’s PETE (photon-enhanced thermionic emission) technology for solar cells.