

## + ENERGY AND DRIVE ISSUE



### Foothill College Center for a Sustainable Future



### CENTER HIGHLIGHTS

#### EARTH JUSTICE DAY

Students, Faculty & Staff from across the campus took part in a very special Earth Day celebration at Foothill. This year, the theme was Earth Justice, and focused on the connection between the destruction of our planet, and the exploitation of the world's most vulnerable populations... To find out more, check out the article on page 4.

#### NEW THEME FOR 2013-14 SUSTAINABLE LEARNING COMMUNITY

The Sustainable Learning Community members have chosen "THE HUMAN FACTOR" as our theme for 2013-14. Please see page 11 for information on how you can join in the collaboration and participate next year!

### + OUR MISSION

- Foster ecoliteracy across the curriculum
- Revitalize & re-envision general education through the lens of sustainability
- Cultivate sustainable values and practices on campus
- Collaborate with the greater community toward a sustainable future

## THE SELFISH ACTIVIST...

by Ellora Reeves

Every time I pump gas into my car I feel guilty. This was what first sparked my interest in sustainability. Moving to the city also helped. I grew up in the country and it is still a big part of me; every time I walked by a series of buildings in town, I would think of the trees that grew so green and beautiful around my family home. It made me wonder as I filled up my tank, if I pollute the world, how does

it affect my life? How does it affect that countryside where I grew up? I started caring about sustainability for selfish reasons, which remarkably developed into caring about the environment around me. I started out thinking about the world the way most people do—how does this

more on **2**

pertain to me? When I was in middle school, my class took a trip to Yosemite—this was the first time many of my friends had seen real nature. I remember the looks on their faces when they saw a deer for the first time. They were filled with curiosity, and astonishment at the beauty the world had on display.

Thinking about the environment and my effect on it has been an evolving process for me.

Beginning to see the world and have appreciation for it, my thinking I have to help so I can still see natural beauty slowly changed to the idea that natural beauty should be preserved so all people can learn from it, so people can grow. What does gas have to do with seeing the natural world this way? Every time that oily sludge is pumped into my car I feel the black sludge of guilt. Being a novice, I did not know about other options—especially ones that I could afford as a college student. I knew there were things like solar and wind energy but I began to wonder, what else is out there? And why

don't I hear more about other forms of energy?

What I found is that there are many reasons: the technology is relatively new; since it is new, there is a lack of demand; no funding for development; a need for scientists...

Do people want to invest millions of dollars into these technologies when the idea is still a prototype? As an idealistic college student I am compelled to say “yes,” but as a realistic person, it is easy to see the answer being “no.” Like my first consideration regarding sustainability, the question comes up: “What’s in it for me?” While you mull that one over, here is a quick overview of some of those alternative energy sources that exist out there.

**WIND.** Wind energy is a simple way of converting energy quickly but its disadvantage is it requires a lot of investment in the start up. This investment builds over time and maintenance costs are low, so after some time wind turbines begin to pay for themselves.

Wind turbines advantage is they work best in windy, flat, rural areas—where they can provide power to farms and housing developments in the countryside.



**WAVE AND TIDAL.** Wave energy is one of the newer technologies being explored. But using water to create energy is not new—hydroelectric / dam techniques have been used for years to supply energy but they take a definite toll on the environment. Now we have begun to look at using the waves near our shorelines. New Zealand is committed to wave technology; by 2025 their goal is to be using 90% renewable clean resources. New Zealand Wave Energy Company is working on two types of coastal energy. “Tidal energy is derived from height changes in

(CONTINUED)

sea level, caused by the gravitational attraction of the moon, the sun and other astronomical bodies on our oceans.” (wavenergy.co.nz) They use large turbines under the water to harness the energy from tide changes. Wave energy uses the wax and wane of the waves to collect kinetic energy. Both forms of energy can be very useful to coastal cities.

**GEOTHERMAL.** According to benefits-of-recycling.com, “The use of geothermal energy as the



alternative source of energy is actively discussed these days. It is a very “green” way to receive energy, because when the Earth temperature is used to heat houses or generate electricity, no harmful chemicals or greenhouse gases are produced. Geothermal energy is very clean; it does not cause air, water, or soil pollution. Another benefit of geothermal energy is that

it represents a renewable source of energy. The hot water or steam is returned back into the Earth after being used. So, it could be a virtually endless cycle not subjected to exhausting.”

Wait, did I just hear that right? *...an inexhaustible, sustained resource using heat from the Earth to generate clean energy?* I think so. Geothermal energy uses volcanoes or anywhere where the magma of the Earth’s surface is exposed. Using drilling techniques, holes are driven into the Earth’s crust to find pockets of boiling water, the steam is then pumped out and the heat is used as a source of energy.

**SOLAR.** Outside of oil/coal, solar is one of the most widely recognized forms of energy, and there is a wealth of information available, so I will forego explaining solar power and encourage you to look around online if you are interested.

I hope this information has peaked your interest in energy



“TIDAL ENERGY IS DERIVED FROM HEIGHT CHANGES IN SEA LEVEL, CAUSED BY THE GRAVITATIONAL ATTRACTION OF THE MOON, THE SUN AND OTHER ASTRONOMICAL BODIES ON OUR OCEANS.”

and sustainability. Perhaps like me, you may start out as a selfish activist, and grow into believing in something beyond yourself.

If you would like to learn more about how to get involved with the Foothill College Center for a Sustainable Future, or find out more about programs, clubs and events on campus, visit our website [www.foothill.edu/sustainability](http://www.foothill.edu/sustainability). 

*Ellora Reeves is a biology student and an intern with the Foothill College Center for a Sustainable Future.*

# EARTH JUSTICE DAY

APRIL 17, 2013 by Mia Casey



Earth Justice Day began as an idea championed by our beloved instructor of English and all things Green, Scott Lankford. Along with his colleagues Keith Lee and Preston Ni, Scott was selected as a Fellow with the Stanford Human Rights Education Initiative (SHREI). From his participation with SHREI, and out of a desire to bring international human rights issues to campus and make people aware of the connection between environmental destruction and the exploitation of the world's most vulnerable populations, Earth Justice Day was born.

Scott and the Sustainability Committee spread the word far and wide about our “Dare to Care” theme for Earth Justice Day, and collaborations between clubs, classes, committees and groups on and off campus sprung up quickly. Some of the highlights from the day included a Slam Poetry event put on by Middle College students; a screening of the human trafficking expose “Not my Life”; a flash mob dance called “Gangnam for Freedom”; a visit from Princess Gaia (Gay-a); and a unique Hope for Dessert dinner fundraiser that was hosted by the Microcredit Club (for more info on this event, see page 5).

*Slavery is an issue that we should be aware about, and what happens with other people lives, which is also happening in third world countries. I think students can learn more from other students about the topic of slavery.*

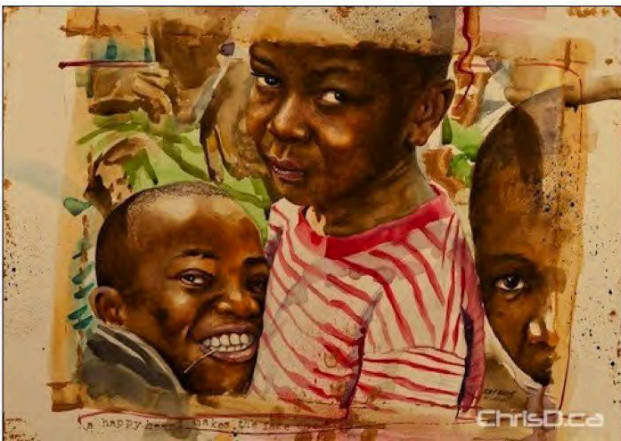
-Daniel Strom  
Athletic Injury Student

## SPECIAL THANKS TO OUR SPONSORS, SUPPORTERS AND PARTICIPANTS:

API Heritage Month Committee • Microcredit Club • U.N. Club • GSA Club • Honors Connection Club • Middle College • Anthropology Club • Center for Applied Anthropology • International Students Club • President's Office • Student Activities • FA-PAC Interns and Faculty • Global Citizenship Curriculum Development Group • Stanford Human Rights Initiative • CSU State Chancellor/SJSU Campus Compass Program • CSM Alpha Gamma Sigma Society

*Earth Justice Day was a success because students actively and excitedly practiced two fundamental campus objectives: developing global consciousness and showcasing sophisticated critical thinking skills. I was inspired by the capacity for engaged learning (for both collaborating faculty and students involved) when the larger campus community comes together to make a positive local and global change.*

-Hilda Fernandez  
English Instructor




**Hope For Dessert  
Fundraising Dinner**

**Earth Justice Day**  
**4:30 pm—April 17th, 2013**  
**Foothill College Cafeteria**

**\$3/Ticket** Purchase tickets at Foothill Bookstore  
 (Tickets: \$5 at the day-of-event)

100% of proceeds go towards making loans to potential entrepreneurs  
 via [kiva.org](http://kiva.org) and to children's education via [TheSchoolFund.org](http://TheSchoolFund.org)

What got us really interested in participating in Earth Justice Day is when we realized that in addition to having an economic impact on lives of the poor, microcredit can have an equally large social impact by intervening human trafficking and slavery (after learning about AMK, a Cambodia based Microfinance Institution that makes loans to women sex workers, to help them start a new life).

The purpose of the Hope for Dessert dinner was to reflect on inequality, and injustice that exists in both the developing and developed world. The dinner had an interesting twist. 90% of our guests were fed simple food (rice and beans) and had to sit on the floor. They reflected the "poor." The remaining 10% of our guests were treated lavishly, fed a full course meal by waiters, and sat on well-decorated tables. This minority group reflected the "rich."

As expected, most of the guests who were "poor" were startled and confused as to why they were being treated unfairly. They complained amongst themselves but, none made an effort to storm to the "rich" side to eat the nicer food. They helplessly sat there and accepted the fact that they were "poor." On the other hand, the "rich" did not offer any food to the "poor." These two were the two most interesting observations, because they closely reflected on how our society functions. At the end of the dinner, all the 70 guests were served cupcakes for dessert, which was why we chose the title "Hope for Dessert" - to emphasize how important "hope" (to survive) plays in the lives of the poor.

-Hriday Thakkar, International Business Student and  
President, Microcredit Club

## EARTH JUSTICE DAY

### THE STUDENTS SPEAK

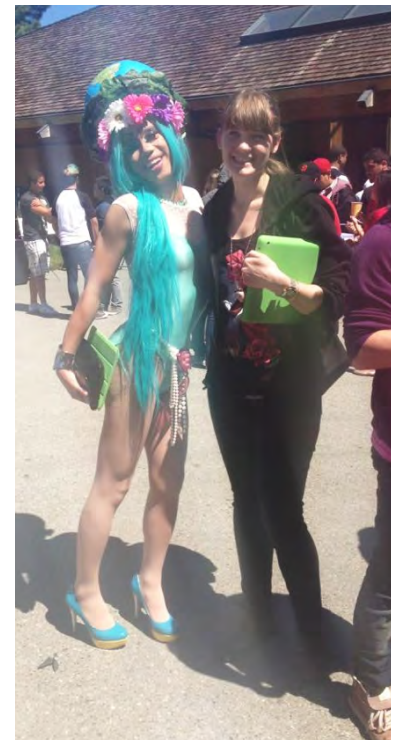
*The Change I saw in students of Foothill College defined for me the lack of knowledge about slavery and how much students do care about their impact on the world.*

...

*Some were stunned, others angry, and many were sad. At the same time all of them wanted to do something drastic to affect a change. Whether that was signing petitions, initiating conversations, or just showing support at this event.*

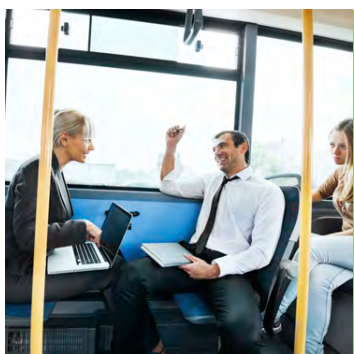
*At the end of the day what I saw was Change. Change in the will of students to no longer be silent contributors to a system that supports slavery, but instead become a strong group of individuals that express an unwillingness to become a part of a silent generation.*

-Ellora Reeves, Biology Student,  
Intern with Foothill College Center for a Sustainable Future  
and Earth Justice Day Student Coordinator



Ellora at Earth Justice Day with Princess Gaia





## THE COMMUTE:

IS THERE A BETTER WAY?? by Mia Casey

I have always believed that each of us needs to take personal responsibility when it comes to issues around sustainability. Yet here I was, driving 16 miles to work each way, and not in the highest MPG car either... contributing to those greenhouse gas emissions that I am diametrically opposed to. To say that I felt 'conflicted' about this would be an understatement.

I decided I had to do something. I could not afford an electric car (although, mark

my words, some day I will get my Tesla Model S!) But I *could* try carpooling without too much trouble or expense. I decided to test the waters.

My husband worked in Palo Alto, so he and I tried commuting together a couple of days a week. It took a little adjustment on my part, not scheduling appointments or other off campus events when I had no vehicle to drive. But it worked!! And, I realized after a few months, I was not just saving GREEN, I was saving GR\$N !!

(CONTINUED)

We began to commute together more frequently, almost everyday. I was surprised how my dependence on having my own car available at all times drifted away more easily than I thought. Sure, I had my car – if something came up, I could drive myself to work. But it was actually really infrequent that I had to have a car.

I know what some of you are thinking. *I have kids, I am so busy, I have appointments, shopping to do...* Guess what? Me too!! My life is hectic. I have five kids, three of whom are still at home, and one with an extremely busy band and activity schedule... but somehow I made it work. Believe me, it surprised me too!

It also gave me courage to see how far I could take this. When the lease was up on our Volvo, we just gave it back. We decided to see how far we could go with just one car. I kept remembering my mom and dad, with seven kids, who had one car for many, many years. So we jumped in. For over a year, we had only one car. I won't say it was



... DEPENDENCE ON  
HAVING MY OWN  
CAR AVAILABLE AT  
ALL TIMES DRIFTED  
AWAY MORE EASILY  
THAN I THOUGHT.

easy—it took planning. When I wanted the car for appointments or other things, I would drop my husband at work, which meant driving up to Palo Alto and back. He also had to make adjustments, taking the train occasionally. But it wasn't as much effort as I thought. And it felt good, to do something for the environment—to do my part.

But there were also a few side benefits. One was the pleasure of



chatting with my husband, sharing the ride. We even listened to books on tape together! Then of course, there was the savings. Only one car payment, less insurance, no gas! I saved SOOO much, I was able to do my kitchen remodel!

Unfortunately, my husband was transferred to the Walnut Creek office, and we can no longer carpool. I must admit, I miss that time together, connecting, just him and I.

But I haven't given up on carpooling. I am a firm believer. I found two folks here at Foothill who live nearby, and we carpool together as often as we can!

So I'd like to invite you...no wait, I challenge you!! Can you go without a car one day a week? Find a partner from work who lives nearby and share the ride? Or take a train or the bus one day a week? You don't have to dive in – test the waters like me... just stick a toe in! You may find the water is just fine!

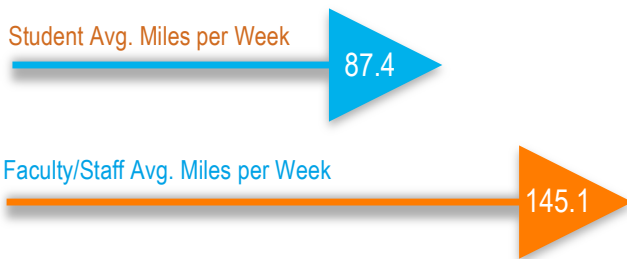




# SURVEY SAYS...

The Foothill Transportation Survey was just completed. The Survey will help to inform our Greenhouse Gas Audit report—gauging how far students and staff are traveling, what forms of transportation they use, and what kinds of transportation alternatives they are looking for.

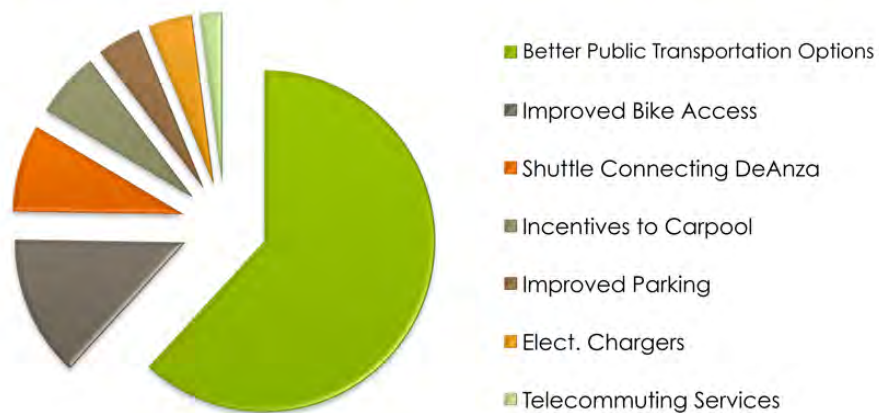
The average student travels 13.4 miles to school and comes to campus 3.5 times per week; the average miles traveled per week: 87.4 miles.



The average Faculty/Staff member drives 17.6 miles each way, coming to campus 4.2 per week; the average weekly miles traveled: 145.1 miles.

DID YOU KNOW THAT IF ALL FACULTY AND STAFF WERE TO DRIVE ONE DAY LESS PER WEEK (THRU CARPOOLING, PUBLIC TRANSIT, ETC.) FOOTHILL WOULD SAVE OVER A HALF MILLION LBS. OF CO2 EMISSIONS PER YEAR?

## Desired Transportation Improvements and Alternatives



**ATTENTION** Foothill College **ACADEMIC STAFF**  
Upgrade. Advance.  
**NEVER BUY GAS AGAIN!**



NISSAN LEAF™: 100% ELECTRIC. ZERO GAS. NO TAILPIPE. A REAL CAR THAT'S FUN TO DRIVE.

LEASE A NEW  
2013 LEAF™ S
\$156\*
College/University  
Faculty Program  
\*with first payment down  
for 24 months

per month

**4 EASY STEPS:**

1. Visit [www.insidenissan.com](http://www.insidenissan.com)
2. Enter **2013 College/University Faculty Members code "VPP010293"** and Get Your Claim ID > Business Associates
3. Utilize all rebate, tax benefits and privileges available to you!  
See [www.nissanusa.com/leaf-savings](http://www.nissanusa.com/leaf-savings) for further details.
4. Take claim ID to your Nissan dealer, your no-haggle price is already set!

**PROGRAM DETAILS :**

- Open to **all** Academic staff members engaged in instruction, research, administration, or related educational activities.
- Eligible for **\$1000 off** dealer invoice and \$7,500 federal tax incentive!
- All lease payments incorporate the \$7,500 federal tax incentive (tax, registration and tags not included). Final payment prices may vary. Please inquire regarding other finance terms.

• Limited time offer valid until **July 1, 2013**  
• MSRPs reflect net savings after federal tax savings

	S	SV	SL
	Starts at \$21,300	Starts at \$24,320	Starts at \$27,340
General public 24 months <b>+with \$1999 down</b>	\$140 per month	\$184 per month	\$247 per month
<b>Business Partner 24 month lease + with first payment down</b>	<b>\$156 per month</b>	<b>\$197 per month</b>	<b>\$258 per month</b>

CALIFORNIA STATE  
REBATES & PRIVILEGES

**Alternative Fuel Vehicle Refueling Property Credit**

An income tax credit up to \$1,000 for the cost of qualified home charging equipment. Expires Dec 31, 2013.

**Electric Vehicle Purchase Rebate**

Rebate of zero to \$2,500 per vehicle to be claimed by individuals and businesses.

**Single Occupancy HOV Lane**

Unlimited use of HOV lanes by vehicles with White or Green Clean Air Vehicle sticker. The program is scheduled to expire December 31, 2014.

**The Fine Print:**

On approved Tier 0 credit through Nissan Motor Acceptance Corp. Not all applicants who apply will be approved. Leases based on 12,000 miles a year. At lease end lessees responsible for \$0.15/mile over the sum of 12,000 annual miles and their term (24 month term, 24k miles) and excessive wear and tear. Lessee responsible for insurance. Closed-end lease offered to highly qualified lessees on approved credit by NMAC. Additional charges may apply at lease end may apply (lease disposition fee).  
<sup>1</sup> Based on information found on <http://www.fueleconomy.gov/>

Questions? Please contact your  
 Nissan EV Business Development Manager  
[jeannie.lam@nissan-usa.com](mailto:jeannie.lam@nissan-usa.com)  
 To learn more about the Nissan LEAF™  
[www.nissanusa.com/leaf-electric-car](http://www.nissanusa.com/leaf-electric-car)



JOIN US!



# THE HUMAN FACTOR

## THEME FOR 2013-14 FOOTHILL SUSTAINABLE LEARNING COMMUNITY

The Sustainable Learning Community is going into a fourth year at Foothill College. In Year One, the learning focused around Food, with topics including agriculture, organics, the slow food movement and world hunger. Year Two's theme was Water, including topics around privatization and consumption, the history of water and innovations. This year, our focus was on Energy, and included discussions around renewables, energy policy, and energy poverty.

For 2013-14, we turn the focus towards the Human Factor in Sustainability. We will include topics around global consciousness, environmental racism, personal sustainability, and factors that influence human behavior and the environment. This theme also ties in with other happenings on campus around Global Leadership, and work around Student Equity and Diversity.

The learning community has successfully integrated sustainable themes into many participating general education classes, deepening learning, peaking student interest and energizing the curriculum. Now is your chance to be a part of this campus wide learning project. We are looking for more instructors and staff to join our ranks!! Instructors can review the resource materials and decide where and how to involve their students and course in the theme. There are many opportunities for collaboration with colleagues, as well as participation in co-curricular activities on campus.

Visit the Foothill College Center for a Sustainable Future website at [www.foothill.edu/sustainability](http://www.foothill.edu/sustainability) for more information or contact Mia Casey by email at [caseymia@fhda.edu](mailto:caseymia@fhda.edu) or Scott Lankford at [lankfordscott@fhda.edu](mailto:lankfordscott@fhda.edu).



# THE ONE MILLION kWh CHALLENGE!

by Jamie Orr

This fall, the Foothill-De Anza Community College District community will be challenged to reduce our energy use by one million kWh annually to promote community climate-action. This reduction goal will be achieved through a collaborative and interdisciplinary effort across campus to change behavior related to energy use.

Energy efficiency goals cannot be achieved by technological advances alone, so this project aims to focus upon “the human factor” by enlisting students and staff as energy champions, both on campus and in the community.

As part of the Science Learning Institute's “Living Laboratory”, student teams will be measuring, monitoring, and managing energy use in campus buildings in collaboration with facilities staff. As those teams learn how and where our campus energy is being used, the Sustainable Learning Community will be



promoting energy efficiency behavior and “energy intelligence” in classrooms and through campus events throughout the year. If the goal is met, it will save one million pounds of carbon emissions from the environment! 🌱

*Jamie Orr is a Physics & Engineering Instructor with the PSME Division*

*New this Fall!*  
CHEMISTRY 20:

*I MATTER!*  
AN INTRODUCTION  
TO CHEMISTRY AND  
THE ENVIRONMENT



*Not sure about Science?*

Take Chem 20 and explore chemistry, the language of matter. Discover why your understanding of green chemistry matters – no matter what your major is!

This course introduces students to one of the most significant emerging fields in modern chemistry, green chemistry, which connects the optimum use of chemistry to the well-being of humanity and the environment. Perfect for your general science course and for your future!

## FOOTHILL SUSTAINABILITY COURSE SPOTLIGHT

*Did you know that YOU are part  
of the global energy conversation?*

As part of Foothill's growing Sustainable Learning Community, the PSME Division is proud to offer a general education, introductory course in Sustainability. Students in this course will learn about the far-reaching implications of modern energy use and what they can do to effect positive change. They will examine humanity's efforts to harness and generate energy and participate in discussions about climate change, global population dynamics, energy consumption and economics, energy poverty, and environmental justice. In addition to inquiry-based laboratory activities, students will also benefit from guest lectures by Silicon Valley experts in clean energy and environmental conservation as well as tours of high-efficiency green homes and industry tours to provide an glimpse of how sustainability is being promoted at the local level.

ENGR39 (5 units) will be offered Fall quarter 2013, please see the course schedule for more information. The course is both UC & CSU transferable and satisfies Foothill GE Area III.

ENGINEERING 39:  
ENERGY, SOCIETY & THE ENVIRONMENT

*An Introduction to Sustainability & Modern Energy Use*



# THE LIVING LABORATORY

## AND SUMMER STEM CAMPS by Robert Cormia


Foothill College will leverage their energy and building infrastructure as part of the 'Living Laboratory' for students to explore real energy systems, perform walk through energy audits, and analyze energy data from our numerous building types. As the 'energy dashboard' is installed, students can view energy use in the new PSEC facility. Beginning in summer 2013, students in the STEM summer camp will explore the Foothill College

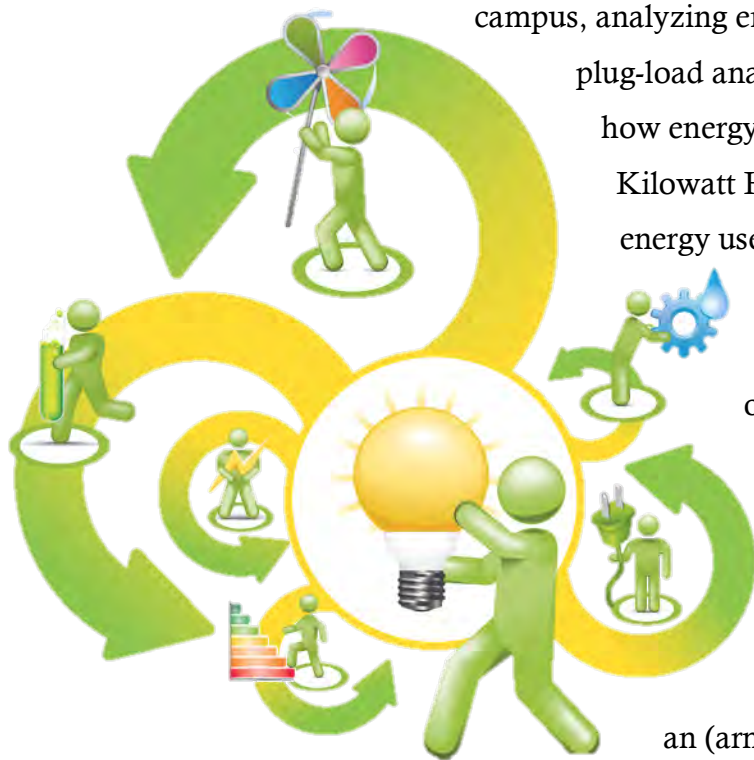
campus, analyzing energy data, exploring buildings, and beginning

plug-load analysis, helping to determine when, where, and how energy is being used. This is part of our "One Million Kilowatt Hour Challenge", and effort to reduce electrical energy used by the FHDA College District by 5%,

combining technology enhancement in energy analytics, student and staff awareness of energy use, and directed efforts in our campus energy and sustainability programs.

The campus is a living laboratory for training a technical and professional workforce in advanced energy systems, as well as educating a community and developing

an (army) of (community) energy champions. 



*Robert Cormia is an  
Engineering & Nanoscience Instructor  
with the PSME Division*



*Are you hiding your  
inner 'GREEN'?*

*Is there sustainability  
in your soul?*



*WE NEED YOU!*

We are looking for new classified, faculty, administrator and student recruits to work on the Sustainability team for 2013-14.



If you would like to become part of a fun and exciting team (and earn some PGA/PAA credit!) please contact Mia Casey at [caseymia@fhda.edu](mailto:caseymia@fhda.edu).



Meetings are held the 2<sup>nd</sup> Tuesday of each month at 3:30 p.m.