

Life n ERG

A student-run newsletter for the Energy and Resources Group Community

November 2000

Energy and Resources Group

University of California, Berkeley

Why is there Life on ERG?

Life on ERG is the revival of the popular *ERG Newsletter*, which was temporarily discontinued due to lack of funding in 1998. In order to maintain communications within the ERG Community at Cal and especially with the ERG Alumni, we as students have come together to continue the tradition. Many people I have talked to expressed enthusiasm for reaching out to alumni and affiliates. *Life on ERG* is intended to be a fun and effective way of letting the community know about ERG news and events, and letting students gain valuable insight from ERGies in the working world – an amazing resource for a better understanding of Life AFTER ERG. Please take a moment to catch up with us at ERG, with special attention to the features on ERG alumni on pages 4-5. Please send relevant information to include in the February edition of the newsletter to me at hannahf@socrates.berkeley.edu. If you would like to help write articles, let me know. I hope that you enjoy *Life on ERG*, and gather energy from the excellence and passion of ERGies past and present.

—Hannah Friedman, editor

Upcoming Events

DG Conference November 9 and 10, in San Diego.

The California Alliance for Distributed Energy Resources is holding a conference titled “Distributed Generation: Reaching the Market.” The conference will cover topics such as: power reliability, interconnection, the future of DG (address given by Amory Lovins), renewables, financing projects, rate and tariff design, fuel cells, environmental impacts, and more. For information: <http://www.cader.org>

“Electricity Summit : Deregulation or Reregulation?”

Clark Kerr Conference Center, Joseph Wood Krutch Theater University of California at Berkeley November 13, 2000 12:30-6PM. **Free for students.** Co-Sponsors: Richard & Rhoda Goldman School of Public Policy, the U. C. Energy Institute and the Competition Policy Center of the Institute for Business and Economic Research. **For registration information and further details:**

http://gspp.berkeley.edu/events/electricity_summit_conference.htm

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The **Taking Nature Seriously** conference, Eugene Oregon, Feb. 26-28, 2001. More information is available at <http://darkwing.uoregon.edu/~tns> Reuben Deumling and Gwen Ottinger will be presenting an absolutely riveting joint paper.

Event & Travel Reports

Julian Marshall went to the **Bioneers conference** (www.bioneers.org) at the end of October, and he reports that it was great! The speakers were all inspiring, lead visionaries in the field. The crowd was filled with non-profit groups, NGOs, citizen-activists, and lots of good energy. The conference focused on what people are doing to fight for justice and environmentalism, rather than just focusing on the problems.

ERGies **Peter Hayes** (ERG Ph.D.), **David Von Hippel** (ERG Ph.D.), and **Chris Greacen** (current ERG Ph.D. student) returned on October 3 from a three week trip to North Korea with Mick Sagrillo (small wind energy expert) and Tim Savage (Korea analyst). The trip, which was part of the Nautilus Institute’s peace and security work in North Korea involved the repair of a village power wind system installed two years ago. The group also worked with North Korean engineers and farmers to install an 8 foot diameter water pumping windmill on a 42 foot tower. For pictures and further description of the trip and Nautilus Institute’s work in North Korea, see <http://www.nautilus.org/dprkrenew/mission20001006.html>

Executive Committee Report

This semester the ERG Executive Committee (ExCom) has been dealing with a wide range of issues including two faculty searches, ERG's development needs, improving affiliate relations, and how to keep ERG students, faculty and staff happy while working conditions worsen due to the retrofit of Barrows Hall. Student representatives for the Fall 2000 semester are Joanna Lewis (master's student) and Louise Wells (PhD student). Students should contact Joanna or Louise with issues and concerns that they would like the Executive Committee to discuss.

—Joanna Lewis

Climate Change and Biodiversity Research Group

Our group does research in two main areas. The majority of the lab studies ecosystem mediated feedbacks to climate change. In particular, through a warming experiment and an elevational transect study at the Rocky Mountain Biological Lab, we are examining the effects of climate on soil carbon. We have found that these effects are in part mediated by species composition. This finding has led to further study of the basic processes that control species composition and diversity. The second ongoing effort is a study of spatial patterns of biodiversity—in particular, the scale invariance or self-similarity in species distributions evident from characteristics such as the power-law form of the species-area relationship ($S=cA^z$)—and the processes which might lead to these patterns. A recent (Oct 27th issue) Technical Comment written by Annette Ostling, John Harte, and Jessica Green published in *Science* examines self-similar patterns in tropical tree species. (<http://www.sciencemag.org/cgi/content/full/290/5492/671a>).

—Annette Ostling

Environmental Justice Group

Environmental justice (EJ) and other diversity issues at ERG are currently handled through two or three related initiatives. The Race and the Environment Forum was founded in the fall of 1999 and meets several times each semester to discuss environmental justice and related issues of race and racism relevant to environmental problems. The group has also been involved with projects, including organizing an EJ workshop for local high school students and participating in a toxic tour of the East Bay. Currently, we are trying to organize an undergraduate or graduate course for the spring semester.

Another important initiative began this past summer with the receipt of two diversity grants from the graduate division. ERG is using this money, totalling \$9100, to encourage greater collaboration between ERG students and EJ groups, to develop curriculum improvements for ERG courses, and to outreach to diverse candidates. The ERG diversity committee also continues to work on related projects. If you are interested in helping on any of these initiatives, please contact Cathy Koshland, Meena Palaniappan, or Michael Starkey.

--Mike Starkey

Climate Change Policy Group & Seminar

Meeting time: Tuesday evenings, from 5:15 - 7:15 PM

Location: 321 Haviland

The Climate Change Policy Group meets as a weekly seminar (which can be taken for credit through ERG), and as smaller working groups that develop and evolve through seminar activities, individual research interests and issues of current policy importance. The group is open to the entire UC community and is comprised of graduate students from ERG, ESPM, Chemistry, Geography, Sociology, and Integrative Biology, as well as faculty from UC Berkeley (ERG and IGS) and UC Davis. The purpose of the group is to bring together students and faculty from different departments working on the interdisciplinary issue of climate change. Our meetings provide a forum for scientists, economists, policy-makers and activists to discuss important issues in international and domestic climate change policy. We bring in speakers (both in person and via conference call) to engage the group in active conversation with people who are at the forefront of climate change policy negotiations. Members of the group alternate in preparing weekly seminar topics by selecting readings, arranging a speaker if appropriate and facilitating discussion.

This is the second semester that the climate change policy seminar has been active, and this semester has seen several continuing participants as well as many new participants. The group has been very successful in pooling its resources to produce materials to influence the greater academic and policy community. Last semester several group participants formed a working group on equity issues in the climate change negotiations, and published a policy piece in *Science* (available at the RAEL Website - see RAEL update). This semester, several group participants have formed a working group on the Clean Development Mechanism (CDM) of the Kyoto Protocol and are currently working on a report for the Climate Action Network (CAN) on the role of public participation in the CDM. In addition, several group members will be attending the Sixth Conference of the Parties to the United Nations Framework Convention on Climate Change in late November in The Hague, Netherlands.

For more information, please drop in on a seminar or contact one of the group facilitators:

Paul Baer: pbaer@socrates.berkeley.edu

Barbara Haya: barbarak@socrates.berkeley.edu

Joanna Lewis: joanna@socrates.berkeley.edu

-- Joanna Lewis

RAEL: Renewable and Appropriate Energy Laboratory

Professor Daniel M. Kammen is the Director of the new Renewable and

Appropriate Energy Laboratory (RAEL) in ERG. RAEL is a unique new research, development, project implementation, and community outreach facility which focuses on designing, testing, and disseminating renewable and appropriate energy systems. The laboratory's mission is to help these technologies realize their full potential to contribute to environmentally sustainable development in both industrialized and developing nations while also addressing the cultural context and range of potential social impacts of any new technology or resource management system. The research efforts at RAEL draw on ongoing work in a variety of fields, including: energy engineering; independent power generation and sales; centralized and decentralized grid management; energy infrastructure and commercialization; environmental and resource economics; microcredit and development; the social analysis of knowledge systems and technology; and environmental risk analysis.

Despite the fundamental importance of energy systems, university laboratories devoted to this issue are rare, and RAEL is essentially alone in its focus on renewable and appropriate energy technologies and applications. A university laboratory focused on use inspired basic and directly applied energy research is crucial, however, if renewables are to become a mainstream energy option. RAEL will be a hub for training, public-private sector collaboration, and the development of tools and materials to support sustainable energy policies and practices. It will facilitate research and development (R&D), as well as demonstration and commercialization (D&C) projects in addition to wider work on the sociology of energy management.

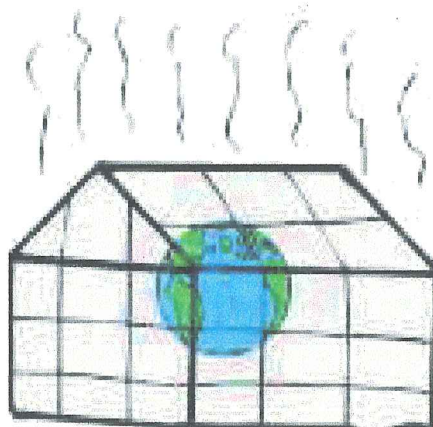
Research will include the 'practical' questions surrounding grid extension and the integration of renewable energy sources that is of interest to a range of groups. The emphasis will be on integration, and not isolation of renewables, and will therefore be of use to electric utilities as well, both in providing new services in developed nations, and in increasing the type and diversity of energy services in developing nations.

The laboratory has initially undertaken research projects on small-scale wind energy systems and photovoltaics in both grid-connected and stand-alone applications, and projects on biomass energy, decarbonized and appropriate fossil fuels, and other emerging energy systems. An ongoing research program on the health, environmental, and socioeconomic impacts and opportunities for high-efficiency wood and charcoal stoves for rural areas in Latin America and Africa has transferred with Dr. Kammen from Princeton University to RAEL. A second project on renewable energy technologies for the provision of potable water in Mexico has also moved to the RAEL.

A range of other projects are planned, including: developing training multi-language training materials for the installation, maintenance, and economic assessment of solar, wind, and biogas energy systems characteristics hybrid renewable-fossil fuel energy systems for stand-alone and grid-connected application; flexibility analysis and adaptability of renewable energy systems to provide mechanical services and electricity generation; energy services, health impacts and the economics of alternative cookstove/fuel designs and combinations; and the potential for income generation and clean energy as a tool for ecological conservation.

RAEL will be a nexus of international training, with an active visiting scholars and practitioners program that includes 'sabbatical research' opportunities for people working at national utilities, federal, state, and local energy offices, and private-sector companies. RAEL currently has 4 post-docs and more than 10 masters and Ph.D. students, and has had 4 researchers from all over the world as visitors in the last year. Further information on lab members, publications, and ongoing research projects can be found on the RAEL web site at <http://socrates.berkeley.edu/~rael>.

--Antonia Herzog



Alumni Spotlight

interview by Jamie Fine

Meet Shelley Tanenbaum (M.A. 1978) and Charlie Blanchard (M.S. 1978, Ph.D. 1986)

The year was 1976, President Carter was in the White House, ENGINEERING 160 (which no longer exists) was the ERGies bonding class, and the big energy issue was nuclear power. As members of the second ERG class, they got to know each other at the initiation camping trip in Yosemite (an annual excursion worth resurrecting?) and became ERG's first couple.

Both completed their Masters in 1978. Although they claim that Masters projects back then were considered "no more than term papers", their projects were ahead of their time: Charlie studied the economic value of estuaries, and Shelley examined international agreements and transboundary pollution. After a two-year stay in Washington D.C., they returned to Cal where Charlie earned a second Masters in Statistics and ultimately a Ph.D. from ERG. Charlie's dissertation demonstrating the contribution of southwestern power plant emissions to acid deposition in the Rockies is one that John Harte still glowingly describes in ER102 lecture. While Charlie was in school, Shelley focused on peace activism. Today Charlie and Shelley live with their two children in Albany. They both work with an air quality consulting group called Envair.

JF: What brought you to ERG?

CB: I wanted to shift fields, from the basic sciences (Charlie studied math, chemistry, and biology as an undergrad) to applied environmental problems. Energy as a field of study was just beginning, and being interdisciplinary was a very desirable skill.

ST: I was concerned about the state of the environment. Back then we worried about issues and skills, not careers. ERG was not viewed as a training program.

JF: What is the best skill you learned at ERG?

CB: The back of the envelope calculation.

ST: How to communicate between disciplines with mutual respect and a common language. For example, my work with the Nuclear Dialogue Project involved connecting policy makers with peace activists while teaching dialogue skills to facilitate communication.

JF: What led you to your chosen career paths?

CB: I left academia because I wanted to gain control of my own time. Today we both work at home, often less than 40 hours per week, so we have time to spend with family and volunteer activities.

ST: I did not become a peace activist to further my career. I did it because I was concerned. Now, in addition to working halftime, I spend a lot of time volunteering, such as serving as Treasurer of *EarthLight* magazine. (*EarthLight* magazine "explores the interface of ecology and spirituality".)

JF: What are your professional goals?

CB: My interest has always been to apply interesting scientific work to generate information for policy decisions. Working with Envair involves an unconventional contracting approach. Rather than responding to requests for proposals, we try to identify a need or question and then find somebody willing to pay to have it studied. For example, we've developed methods for analyzing air-quality measurements that can provide much-needed checks on the predictions of air-quality models. Most recently, we have analyzed ambient air quality data to understand regional trends, as well as current air quality, in national parks. For the next 10 years or so I foresee plenty of work inspired by the new ozone and fine particular matter standards, and the regional haze rules. My work will largely involve providing guidelines for how to design monitoring networks and how to use ambient data to understand what's happening in the atmosphere, what are the major sources of pollution, and what are likely to be the best emissions control strategies.

ST: I plan to continue working on our air quality studies. I remain interested in the larger picture and would enjoy looking at the cultural and political forces that have led to major environmental policy changes.

JF: Any advice for ERGies?

ST: Enjoy it and take advantage of the freedom to explore topics and fields because it's hard to do once you start working. Look for work that you feel passionate about because you'll do your best work.

CB: If you have no work experience, take a break between your Masters and Ph.D. Get to know your fellow ERGies.

**If you are an alum and would like to be interviewed for the newsletter, please contact us at hannahf@socrates.berkeley.edu
We would love to hear from you!**

Masters Class of 2000 Graduates Where are they now?

Ari Altman

agaltman@alumni.Princeton.edu

“After daring to delve into the NYC Board of Education many months ago, I moved to New York City with a promise that there might be a job for me in September. A few more months of agony went by before I indeed did begin work at the High School for Environmental Studies, a unique school in New York City’s public high school system, offering specially designed environmental courses as well as standard courses to students from all five boroughs of the city. Over 1200 students attend, and each is required to take the Introduction to the Environment course. I’m teaching two sections of it, along with three sections of world history. It’s a great pleasure to have the chance to share my passion for the field with students who would otherwise have little exposure to environmental issues. The amazing part of the job is seeing how excited they get about beach cleanups, environmental exhibits, lab projects, as well as many of the somewhat complex concepts in environmental studies. Teaching at the school is difficult due to the same problems that haunt any urban school, but the students are so inspiring that the challenge is well worth it.”

Joe Fortier

jfort@igc.org

I have moved to southwest Virginia which feels like it is off the end of the earth from Berkeley. While I haven’t wrecked the Harley yet, it hasn’t been for lack of trying. I miss the craziness at ERG so much. At ERG you are always challenged with difficult problems that often seem to have no good solutions - I remember John Harte’s lecture on the six ways the world could end by nuclear disaster - boy that was a killer at cocktail parties. But at least you always had someone else to lean on - You were fighting the end of the world together. I guess that is my long winded way of saying I miss you all and we all have to stick together if for no other reason than to keep each other going. Heck, I even miss TA-ing 100/200.

This summer, my masters project turned into a rather painful education - I continued to work on the article and turned it in. I succeeded in getting the cover article in the fall magazine of *Terrain* called “Sun Power - Solar Energy’s New Dawn”, which should raise some awareness in readers. But, I

disagreed so much with the direction they took the article after I submitted it that I had them take my name off the byline and publish it under the name of their associate editor Dan Rademacher. All in all, it was a mixed success at best.

This fall I am the busiest man without a paying job I know. We have bought some run down farmland outside of town that we are restoring into an organic farm, and designing and building a sustainable home powered by, what else, renewable energy. Yesterday, I got my truck stuck in the mud up to the axles and had to get someone to pull me out. This fall’s projects include putting in an orchard which won’t bear fruit for another three years and creating a conservation plan for reforesting the riparian zones.

I am also working on starting a community based non-profit network for environmental and social change called ‘One Life, One Planet.’ Right now, it has been incorporated and filed with the IRS and we are working on the operational plan for next year. Dan Kammen has kindly agreed to advise on the board. We hope to organize and sponsor projects that get people involved, improve the environment, help others and teach along the way. Stay tuned, I’ll let you know how it goes.

Sara, Sam and Shelley are all doing well here. If anyone knows of some good plans for methane digesters, send them my way. Otherwise, keep the faith.

Love, Joe

John Galloway

jhg@cpuc.ca.gov

John Galloway will unquestionably file his Masters project in December, completing his long-overdue requirements for an M.S. degree. He worked as an intern at the California Public Utilities Commission this summer on issues related to distributed generation. He is now employed at the CPUC full time as a regulatory analyst developing financing and other programs to distributed energy resources throughout the State. He is also developing an active teaching schedule for Breema Bodywork classes and building a private practice. He recently ran screaming from the fogbelt of San Francisco and has established a happy home in Rockridge.



Saving Energy Without Buying New Products: by Reuben Deumling

PG&E and the EPA both sponsor campaigns designed to encourage and facilitate household energy savings. Energy Star® labels and Appliance Rebates are perhaps the most visible examples of these efforts. These programs were conceived over the past decade as a new approach to saving energy that could be expected to receive support from appliance manufacturers, attract consumer interest (who might have been offended by President Carter's moralism), and overcome informational gaps associated with the purchase of energy consuming products. These programs are funded to a considerable degree through the "Public Purpose Program" item which first appeared on my PG&E bill in June of 1998 as a separate line item, though it is my understanding that the charge existed in less visible form for quite a while prior to this change in bill format. Aggregated over all grid-connected residences in Northern and Central California, this charge accumulates into a fund from which among other things the current \$100 rebate for certain Energy Star refrigerators and the prior \$75 rebate on Energy Star clothes washers is funded. In a future column I will explore some of the dilemmas surrounding this approach to saving energy, but in this issue of the ERG Newsletter I want to enumerate some approaches to saving energy that do not require coughing up many hundreds of dollars. These changes cost little or nothing and require only a bit of time and ingenuity. Most of us in the East Bay (and beyond) have some combination of natural gas and electric appliances. Below I have listed some actions (electrical loads this time around) that anyone with an interest in saving energy inexpensively can accomplish, beginning with the very easy and familiar and ending with the more interesting and less well known.

Lighting:

- Swap compact fluorescent lights (CFLs) for incandescent bulbs wherever fixtures will permit and slightly cooler light is considered acceptable (shape, size and color of CFLs have markedly improved in recent years, so don't be shy). Beware of high-priced CFLs. I routinely come across four- and five-fold price differences for the same product [cost per CFL: ~\$6 and up];
- avoid turning lights on during the day and turn them off when no one is present [cost: \$0];

Resistive loads in general:

- avoid the extended use of resistive electrical loads as much as possible (e.g., don't dry your mittens in the toaster-oven or seal your envelopes with a glue-gun). Waffle irons, hair dryers, irons, and other devices designed to make hot also fall into this category (incandescent light bulbs included) [cost: \$0];
- under particularly unfavorable circumstances this approach can manifest Norgaard's first law of conservation distress. Norgaard's first law refers to Dick's unsuccessful bid to reduce the lighting load in his stand-alone office by carrying out the first item on our long list: swapping a CFL for an incandescent. The effort was unsuccessful because the lights he replaced had been quietly heating the office, a heretofore unacknowledged service which, upon removal of the incandescents, had to be accomplished with *heaters* which were found to more than offset the savings from the lighting swap.

Standby Losses:

- Standby losses, or phantom loads, are generally of little use. As those of you who heard Karen Rosen's recent Ph.D. seminar know, standby losses come about because the "off" switches on electronic equipment do not actually live up to their name. Instead they invariably continue to draw a small—or not so small—amount of electricity while the device is providing little or no service to you, the user. The way I categorize these appliances is into those which provide some (often very small but hard-to-live-without) un-interruptible service and those which provide none outside of their "in-use" mode I can discern. I place my answering machine in the former category and my inkjet printer in the latter. Standby losses in the latter category are best eliminated, and in the next section I will describe several ways to do just that. I leave it up to you to determine which of your own devices fall into which category.
- Unplugging electronic equipment when not in use (computer, printer, stereo, TV/VCR, etc.) [cost: \$0, minor hassle];
- Second-best solution, which some consider easier: plug as many of these electronic devices into a power strip and switch it off as often as possible. The problem with this solution is that if you wish to use any one of the devices plugged into the power strip, all the phantom loads of the other devices power up for the duration [cost: \$0-10, no hassle];

- trickier but (in my opinion) more elegant solution:
 1. secure a handful of push-button switches (one for each appliance you wish to “fix”) from the hardware store (\$2.75 a piece) or from Urban Ore’s electrical section (a few ¢ a piece if you know what you’re looking for).
 2. Equip yourself with (at minimum) a sharp knife, but better yet add an electrician’s pliers.
 3. Unplug the appliance standing by and decide where you would like to add this switch, anywhere between the three-prong plug and the (frequently black and not always visible) transformer box. [In some instances the plug is part of the black box, in which case, see either of the previous options.]
 4. Having decided where to cut, using your knife very carefully extricate only one of the three wires hidden within the gray or black wire housing (Either the white or black one). Don’t do this step without some assistance if you have never worked with electrical wires before.
 5. Cut this wire with your electrician’s pliers and strip the colored plastic coating back about half an inch on both ends using the correct wire gauge stripper and taking care not to sever or abrade any of the other plastic insulation surrounding the other wires.
 6. Depending on the exact configuration of the switch you bought, you will have various options for arranging it to control the current flowing through the two recently severed wire ends. When this has been determined and the wires are connected to the switch, wrap the immediate vicinity of the new switch carefully and neatly with electrical tape to improve the appearance and to keep everything snug. If you followed the instructions carefully this switch is no more dangerous to your health than the prior arrangement. [cost: 25¢-\$3/switch]; Were electronic equipment designed a bit differently none of this would be necessary, but there you have it.

These are some of the nifty means of eliminating, or significantly reducing, energy end-uses I have found to work for me. You may discover others you like better. I won’t bore you with any more examples today, but do wish to end by tallying some of the savings you can expect from each of these measures.

- For CFLs, which are the most expensive items recommended here, I calculate a monetary savings of approximately 5.5 kWh or \$0.57/month for each 60W bulb replaced by a 15W CFL, assuming the light was on for an average of 4 hours per day. With ten such bulbs replaced, you could expect to save around 50 kWh or about \$6.00/month.
- Standby loads I have measured (for better figures, talk to J.P. Ross) vary from about 3W (small radio) to 20W (cable TV box). Assuming, for example, that the device in question is in use for an average of one hour a day, the switching/unplugging described above should eliminate 23h/day of standby loss. This yields 14 kWh or \$1.50/month in savings for a cable TV box, and 2 kWh or \$0.22/month in savings for a radio.

ERG Energy Usage Stats

Household	October kWh/person	Renewable power?
Hannah Friedman and Elisa Derby	46.5	just switched to 100% renewables
Mark Bolinger and Ursula Slate	65	100% renewable since 10/99
Reuben and Diana Deumling	11.5	100% renewables
Anonymous ERGie	117.5	
Annette Ostling	67.5	
Nate Hultman	75.5	100% renewables

Paper usage at ERG

In the past 12 months, 230,000 sheets of paper have been consumed at the ERG student printer and copier! (Double-siding has been accounted for in this calculation.)



Spring 2001 New Courses

ER290 - Energy and Development **Professor Daniel M. Kammen**

This graduate seminar will examine the relationship between development theory and practice and issues of energy use, technology and culture. The course will focus on energy options at the household and community level, paying particular attention to the needs of individuals, often in rural areas of developing nations. We will explore ideas about development that have emerged from civil society, academia, multinational development agencies, and national development plans. This course will highlight the often divergent philosophies about energy systems as a national, centrally planned infrastructure, and ideas of 'appropriate technology', cultural and political aspects of energy services. Themes in the class will include energy and gender, fossil fuel versus renewable energy alternatives, decentralized energy options, and new energy and environmental linkages.
Course WWW page: <http://socrates.berkeley.edu/~dkammen/#courses/er290.html>

ER-290-15 Policies and Strategies in Energy Markets

Severin Borenstein and James Bushnell

In the past 25 years, energy markets have changed from quiet, often heavily regulated, areas of the business landscape to the some of most dynamic markets in the world economy. Regulation of oil, natural gas, motor fuels, and electricity has been reduced dramatically in the U.S. and in many other countries. Electricity deregulation is currently sweeping the developed and developing world. Drawing heavily on the tools of economics and finance, we study the business and public policy issues that these changes have raised. Topics include the development and effect of organized spot, futures, and derivative markets in energy, the political economy of deregulation, motor fuel and congestion taxes, competition in wholesale electricity markets, market power and antitrust, and the transportation and storage of energy commodities. We will examine the economic determinants of industry structure and evolution of competition among firms in these industries; investigate successful and unsuccessful strategies for entering new markets and competing in existing markets; and analyze the rationale for and effects of public policies in energy markets.

ERG Faculty Search Talks

ERG is currently seeking to fill a faculty position starting in 2001-02 in Environmental and Development Sociology. The following are some candidates that will be giving upcoming talks:

Isha Ray

Interview: November 8 & 9

Talk: 4:00 PM, November 8, 2 LeConte Hall

Talk title: "Water, Location, and Cooperation: Some Insights from an Irrigation Canal"

Dr. Isha Ray is the Ciriacy-Wantrup Fellow in the Department of Geography at the University of California, Berkeley. Her undergraduate degree from Oxford is in Philosophy, Politics and Economics, and her MA and Ph.D degrees are in Applied Economics from the Food Research Institute at Stanford University. She has worked in development, both at the International Water Management Institute in Turkey, and for Indians for Collective Action. Her research is focused on the political economy of water, common property resource management, resource access and the poor and transnational river conflicts.

Susanne Freidberg

Interview: November 14 & 15

Talk: 4:00 PM, November 14, Room 105, Goldman School of Public Policy

Talk title: "Jolly Green Giants: The New 'Benign Dictators' of South-North Food Trades"

Dr. Susanne Freidberg is a Bunting Fellow at the Radcliffe Institute for Advanced Study, and is also a Assistant Professor of Geography at Dartmouth College. Her BA in Anthropology is from Yale, and her MA and Ph.D in Geography are from U. C. Berkeley. She has worked with Professors Gates and Appiah at Harvard University as the assistant editor of the *Encarta Africana*. Her research interests are focused on regional and international food trades, cultural constructions of food safety and risk, political ecology, agrarian change, Third World development, gender analysis, and Africa.

Nathan Sayre

Interview: November 16 & 17

Talk: 4:00 PM, November 16, 2326 Tolman Hall

Talk title: Ranching, Conservation, and the Spectre of Suburbanization, A Social-Ecological History of the Altar Valley, Arizona

Dr. Nathan Sayre is a post-doctoral fellow at the U. S. D. A. Agricultural Research Service, Jornada Experimental Range (Las Cruces, NM). His BA from Yale is in Philosophy, and his MA and Ph.D degrees are from the University of Chicago in Anthropology. His research interests are in environmental history, political economy, agriculture and land use, history of range science, and space and time as economic categories, bureaucracy, and theories of the state.

Caroline Desbiens

Interivew: November 20 & 21

Talk: 12:00 PM, November 20, 103 Moffitt Hall

Talk title: TBA

Ms. Caroline Desbiens is a doctoral candidate in Geography at the University of British Columbia. Her MA is in Comparative Literature from UBC, and her BA in Liberal Arts is from Concordia University in Montreal. Her research interests are in cultural perceptions of territory, nature and environment, globalization and local resource management, naturalism and gender. Her dissertation is entitled, "Power to the People: James Bay, Nationalism and the Politics of Energy in Quebec".

Colloquium Calendar

Wednesdays at 2 LeConte 4-5:30 pm

November 8, 15, 29 are reserved for faculty candidate lectures.

December 6

Andrew Szasz, U.C. Santa Cruz

"The Atomic Fallout Shelter as Metaphor"



Introducing The First Year Class!

The first years were asked to share a little about their background, and spice things up even further with a random fact about themselves....we have some amazing new ERGies yet again!

Garvin Heath comes to ERG after 5 years experience working for the Indoor Environments Division and Climate Protection Division at the US EPA headquarters in Washington, DC. His interests are in indoor air quality and energy efficiency in buildings, especially commercial office buildings. He graduated from Brown University with a B.S. in Environmental Science, concentrating on mechanical engineering. His extracurricular interests include travelling abroad (he spent the year before coming to ERG traveling with his brother through South America and Asia), attending live music events, backcountry skiing, and playing ultimate frisbee. A little known fact of his life is that his favorite power tool is the zip whip.

Devra Bachrach

I graduated in Dec. 1999 with a B.S. from UC Berkeley in Bioengineering with an emphasis in biomedical instrumentation. I became interested in ERG after taking ER 100 as an undergrad. I've worked on issues in the Green Power Market in California with the non-profit Center for Resource Solutions, and have been a Commissioner on the Berkeley Energy Commission for a little over a year. My current interests are in: -the electricity market in California, and what form electricity markets should take to benefit consumers and the environment -transportation and land-use issues - how to make our cities more livable and sustainable-renewable technologies. About me - I swim and do Tae Kwan Do. I like to play guitar, sew, do stained glass, camp and hike, etc...

Rebecca Hansing

I'm a nomadic chemist with experiences in oceanography, wildlife ecology, pharmaceutical R & D, and international development. I grew up in Wisconsin and have split my adult life between Washington D.C. and Oregon with some extended stays in Africa thrown in. My current interests include: technical assistance activities, technological change & policy, renewables, energy efficiency, and genetic resources/chemical diversity. As for my random thing... I once had an uncomfortably close encounter with a troupe of baboons on the roof of a building that ended with some amazing tree shimmying by me.