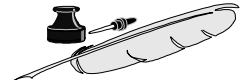




# THE S F PEN



THE SAN FRANCISCO POWER ENGINEERING NEWSLETTER  
Editor-in-Chief: Kris Buchholz

---

PUBLISHED BY THE IEEE SAN FRANCISCO POWER ENGINEERING SOCIETY Vol. 20, No. 1

---

FALL 2002

NOTE: Please pass this on to interested non-PES members

## PUBLIC AFFAIRS 2002 SPRING BANQUET

By Dan Sparks

On June 20, the San Francisco Power Engineering Society held its Public Affairs Banquet at Sinbad's Pier 2 Restaurant in San Francisco. The topic of the evening was "The Electric Environment". Dr. Raymond Neutra and Messrs. Ed Smelloff and Kent Harris made presentations to an audience of 40 members and guests.

Dr. Neutra, with the California Department of Health Services, presented the results of research studying the effect of magnetic fields from electric transmission lines.

Mr. Smelloff, assistant general manager of the San Francisco Public Utilities Commission, described numerous renewable generation resources. He spoke at length on the costs and benefits of different technologies.

Mr. Harris, with the Customer Energy Management Department of Pacific Gas and Electric Company, gave an overview of alternate fuel vehicles.

The presentations were followed by a question and answer session with the audience. All of the presentations were full of useful and surprising information that generated much discussion with the audience. For example, Mr. Harris presented data from a report by the Union of Concerned Scientists that showed that hybrid vehicles saved 4% in lifetime emission compared to traditional, gasoline fueled, ultra-low emission vehicles in "real-world" driving conditions. The small difference in emissions surprised many in the audience.

## IT IS ELECTION TIME AGAIN!

By Xuguang Leng

The SF PES is preparing for the annual elections. The nomination committee for this year consists of Julian Ajello, Bhaskar Ray, and myself. We are looking for candidates for four elected offices: Chair, Vice-Chair, Treasurer, and Secretary, as well as volunteers for other appointed offices. Please contact a nomination committee member(s) if you would like to nominate yourself or others for elected offices, volunteer for appointed offices, or just want more information about ADCOM.

The nomination process will end on October 25. You should receive the ballot in November. Your ballot must be returned by November 29. The election results will be announced in the January 2003 IEEE Grid.

Your participation is vital to this election process. We look forward to hearing from you. Thank you.

### Contact information:

Julian Ajello: (415) 703-1327

[j.ajello@ieee.org](mailto:j.ajello@ieee.org)

Bhaskar Ray: (415) 973-0582

[bxr0@pge.com](mailto:bxr0@pge.com)

Xuguang Leng: (415) 703-2801

[leng@ieee.org](mailto:leng@ieee.org)

## WATCH FOR ANNOUNCEMENTS

November Noon Meeting:

EMF Presentation

December Noon Meeting:

Bio-Diesel Presentation

## 2002 PACE EVENT: BRAIN POWER SESSIONS

By Pauline Tapia

The Professional Activities Committee for Engineers (PACE) has coordinated an Electrical Professional Engineer (PE) Review Course exclusively for IEEE members. Realization of this course was made possible though generous sponsorships of the following organizations:

- IEEE SF Section PACE
- SF Chapter of the PES Society
- OEB Chapter of the PES Society
- East Bay Municipal Utility District (EBMUD)

Starting on August 7, problem-solving sessions have been held Wednesday nights, at EBMUD's Oakland office. The ten-week course is scheduled to end on October 9. An awards dinner and social even will be arranged at a later date to award student certificates of completion and instructor recognitions.

PACE would like to extend its gratitude to the following for their time and effort as course instructors:

- Matthew Collins
- Bernard Tatera
- Diep Nguyen
- Dahn Lai
- Dr. Mohammad Vaziri
- Dr. ShyShenq Liou.

The committee is planning another PE problem-solving session during 2003. Those interested in participating as students or instructors can contact Pauline Tapia via e-mail at [pbt1@ieee.org](mailto:pbt1@ieee.org) at 510-874-2656. We all wish our students SUCCESS when they take their PE exam!!!

**REGION 6 CENTRAL AREA MEETING**  
By Dan Sparks

On September 20, I represented San Francisco Section at the Region 6 Central Area meeting in Honolulu. The Region 6 Central Area Sections include IEEE chapters from the Bay Area, Northern Nevada, Sacramento, San Joaquin Valley, and Hawaii.

One of IEEE's primary functions is to help electrical engineering students. That is a purposefully broad mandate. The Central Area meeting made clear to me that students need, want, and appreciate the efforts of IEEE.

Students from seven universities attended the meeting. They summarized their activities and goals. They also attended a tutorial to make them aware of the resources and benefits available to them as student members of IEEE.

The importance of supporting electrical engineering students was reinforced upon me. San Francisco Section (and SF PES) has close relations with the faculty and students at San Francisco State University (SFSU). SF Section has sponsored scholarships, donated monies for student projects and activities, and supported SFSU students in many ways over the years. This commitment will continue for

the mutual benefit of the students and IEEE.

I encourage all IEEE members to support your local university's (or alma mater's) electrical engineering program. The true benefit is the personal satisfaction that can only be achieved through direct contact with students..... And the students appreciate your help, support and guidance.

**WEST COAST POWER CONFERENCE**

By Bhaskar Ray and Chuck Magee

On October 7<sup>th</sup> and 8<sup>th</sup>, at the San Francisco Hyatt Regency, the West Coast Power Conference and Exhibition will be examining the western states energy supply and focusing on how we can improve the future of the power industry. This conference is an opportunity for members of government, manufacturing, utilities, trading, fuel suppliers and consumers to work together on energy solutions.

Over 70 speakers from merchant power generators, electric utilities, grid owners/operators, regulators and consultants will present two days of intense interactive sessions. Not only technical solutions will be examined, but also the economic and political aspects of our energy situation will be analyzed. The sessions will focus on all of the key stakeholders

from the power plant owners and operators, utilities, power marketers, municipalities, through the government agencies and electric consumers.

Fifty companies will be exhibiting their products and services during these two days. The latest of technologies and energy solutions will be on display. In addition the experts will be available to discuss your specific needs.

This conference is being presented by the Trade Fair Group, Platts Global Energy, R. J. Rudden Associates and United States Energy Association. Sponsorship is being provided by Bechtel, Edison O&M Services, Thelen Reid & Priest LLP, TIC - The Industrial Company, Marson Energy, TurboCare, etc.. Bhaskar Ray is on the Program Advisory Committee along with other power industry professionals.

The cost for registration varies depending on if you want to attend one or both days, or if you want to attend the exhibits only. The standard rate for two days is \$895, or a government rate of \$595. The special rate for groups of 5 or more is \$695 per person. Single day registration is \$450 and the cost for the exhibit hall only is \$75. The SF PES is sponsoring 10 SFSU students by paying for a portion of their registration to the exhibit hall.

More information and the registration form can be found at the website: [westcoastpowerexpo.com](http://westcoastpowerexpo.com)

**MAILING LIST ADDITIONS**

If you are not regularly receiving *The SF PEN*, and would like to, fill out the form below and return to the Editor-in-Chief of *The SF PEN*. Or better yet, become a member of one of the San Francisco Bay Area's IEEE Power Engineering Societies and automatically receive *The SF PEN*. For PES membership information, call Trang Luu, (510) 874-2512 and FAX (510) 874-2507.

===== DETACH HERE =====

RETURN TO: Kris Buchholz  
PG&E  
P.O. Box 770000, Mail Code H12A  
San Francisco, CA 94177 FAX (415) 973-8147

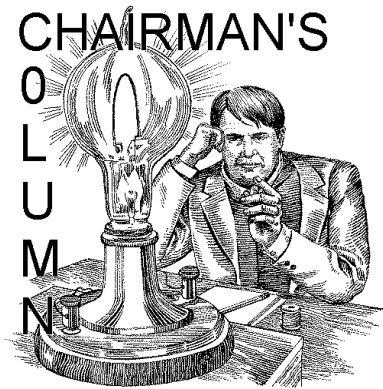
Yes, I'd like to receive *The SF PEN*. Place me on your mailing list to receive future issues.

NAME: \_\_\_\_\_

AFFILIATION: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_



By Siri Varadan

Our Chairman's absence has forced me, the Vice-Chairman, to step up to the plate and sit in the big chair...and write this column. So here goes...

Having recently returned from the IEEE Summer Power Meeting in Chicago as an author and a chapter representative, I want to share some of the thoughts I carried away from this remarkable event.

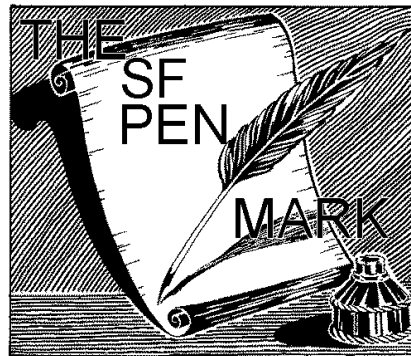
While the technical sessions were well attended, panel discussions seemed to draw record crowds leaving many standing! This was especially true of sessions that explored FERC's role in stirring up the energy pot with its latest Standard Market Design for electric energy markets. Discussions, arguments, opinions, comments and in some cases emotional, "Why fix things when they ain't broke" feelings echoed through these sessions. I, for one, noted that academicians, industry personnel, government officials and the average IEEE member, all showed concern about the dark clouds looming over the energy industry and the critical need for decisive and definitive action. The slow-down in the economy, the Enron debacle, the spate of corporate accounting frauds and the apparent lack of direction and inertia of the energy markets weighed heavily on almost every attendee's mind.

As power engineers, we know the importance of Ohm's Law and Kirchhoff's Law. From what I see, the entourage of lawmakers and energy market designers also seem to understand them. However, it still remains to be seen how an energy market that satisfies legal, financial and electrical criteria will be designed and, more importantly, implemented. In the final equation we are essentially interested in seeing if deregulation or re-regulation, call it what you may, eventually brings forth the desired result - lower electricity bills to the

customer. That is, essentially, the bottom-line for ratepayers like you and me.

At the chapter level, one of our goals is to provide our members a forum for learning and understanding these and other pertinent issues in our industry. To this end we have a solid line-up of speakers to help us carry out our mission. Our November and December speakers are being finalized. The location of the presentations was changed at the last minute, thus we were scrambling to find alternate facilities. If you have recommendations for our future meetings, please contact me at 415-369-1006 or [svaradan@nexant.com](mailto:svaradan@nexant.com).

I am looking forward to your continued support and enthusiastic participation as we all fix problems together.



By Kris Buchholz

Please take a look at the first page of this issue of "The SF PEN." Did you notice which volume this was? 20<sup>TH</sup>!!! Yes, "The SF Pen" staff has been working on this paper FOR 20 YEARS!!! My sincere thanks and gratitude to all of our AUTHORS - and ALL OF OUR FAITHFUL READERS over these years. We hope that we are still achieving our goal of bringing you information from meetings you could not attend, announcements of future meetings and general industry information.

I also could not let this anniversary slip by without THANKING "The SF PEN" Staff. Our staff is a small, but dedicated group that meets four Saturdays each year to put the finishing touches on all of the articles, do the printing, and tri-folding. For those who don't know, we have managed to keep the costs down to just the cost of the paper by "borrowing" the copy machines (THANK YOU PG&E) and hand folding all of the papers. Yes, we are EXTREMELY economic, and your Editor-in-Chief is extremely frugal (aka cheap).

The staff that is present today has been with us for almost all of the twenty years. Jeff Wold has been our graphic artist, providing our logos and, as needed, our photographs and "fill-in" art work. Jeff is also our "mechanic" who runs the copy machine and "fixes" any mechanical problems.... and as you can imagine, over 20 years, we have had our share of copy machine mechanical problems. Dan Sparks & Julian Ajello, as former Chairmen, and dedicated IEEE Officers started helping out during their time in office, and never left. BIG THANKS TO BOTH!!! They help develop the ideas for the articles, gather the material and assist our authors. I also have to thank George Puffett for his MANY years on the staff. George started helping when I met him as an engineer trainee with PG&E. Since then, George has progressed through the SF PES chairs and is now working hard with the SF. We have all had A LOT OF PRODUCTIVE, FUN Saturdays.

I need to add two other names to the roster - Keene Matsuda, the "creator" of "The SF PEN" and Bob Jauregui, one of our original staff members. As most of you know, Keene created our newspaper as a way to communicate with all of our Bay Area IEEE PES members. He developed it, and with Bob Jauregui and me, we started publication.

As we move forward, I will mention again our plans of moving "The SF PEN" to an electronic format for web publication. This format will allow for more timely notifications and direct links to related information. We are currently at the mercy of the USPS and others for mailing and delivery time, thus we know that some of our articles have reached you too late in the past. It will also save us a lot of tri-folding time and paper cuts. We are still quite a way from this stage; however, we will have SEVERAL issues where we will be soliciting names and addresses of those who do not have Internet access and will need the traditional hard copy.

Finally, one quick announcement. The T&D Committee has arranged for the Riviera Hotel in Las Vegas, January 27 through 30 for our winter meeting.

#### THE SF PEN STAFF

Editor-in-Chief	Kris Buchholz
Graphic Artist	Jeff Wold
Staff	George Puffett
	Dan Sparks
	Julian Ajello

**Power  
Engineering  
Society**

**OCTOBER  
30**



The INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.  
San Francisco Chapter

**ELECTRIC SYSTEM CONGESTION MANAGEMENT THROUGH FIRM  
TRANSMISSION RIGHTS**

**by**

**DR. MEHMET KEMAL CELIK, NEXANT INC.**

**DATE & TIME:**  
*Wednesday,  
October 30, 2002  
12:00 Noon*

On October 30, Dr. Mehmet Kemal Celik of Nexant, will speak to the San Francisco Power Engineering Society about using Firm or Financial Transmission Rights (FTR's) to deal with congestion. Congestion occurs when insufficient transfer capacity is available to implement all of the preferred energy schedules in a control area.

**PLACE:**  
*CPUC Building  
505 Van Ness Ave.  
Training Room  
San Francisco*

FTR's (sometimes referred to Congestion Revenue Rights) are financial instruments that entitle the holder to a stream of revenues (or charges) based on defined time periods and energy price differences across specified transmission path(s). FTR's serve as hedges that provide price certainty to market participants that would otherwise be at risk for congestion costs. FTR's can be allocated many ways but one method is through an auction. Dr. Celik will discuss the monthly FTR auctions held by the PJM (Pennsylvania-New Jersey-Maryland Independent System Operator).

*The Training  
Room is accessible  
to the public  
and is located  
adjacent to the  
entrance on  
Golden Gate Ave.*

Dr. Celik is the project manager for Nexant's GridSmart Tools. GridSmart is an on-line suite of advanced simulation tools for the wholesale electricity market. Prior to Nexant, he worked at Pacific Gas and Electric Company and as an assistant professor at Bogazici University.

**RESERVATIONS:**  
*Not Required  
Please contact  
Julian Ajello at  
(415) 703-1327 to  
make reservations.*

Dr. Celik received his BS with honors from Bogazici University in Istanbul, MS from Virginia Polytechnic in 1973, and Ph.D. from Texas A&M. Dr. Celik is a Senior Member of the IEEE. He has authored and co-authored more than 20 papers in power state estimation, distribution automation, transmission and distribution planning, information integration, and signal processing.