Chairs' & Center Directors' Meeting Minutes

Date: May 12, 2014 (12:00 to 2:00 pm)
Location: WCH – Room 443
Attendees: Abbaschian, Reza
Balandin, Alex
Barth, Matt
Bhuyan, Laxmi
Farrell, Jay
Hartney, Pat
Matsumoto, Mark
Myung, Nosang
Najjar, Walid
Ravi
Rodgers, Victor
Vafai, Kambiz

Absent: Aguilar, Guillermo
Bhanu, Bir
Boretz, Mitch
Garay, Javier
Haddon, Robert
Tan, Sheldon
Wang, Albert

The agenda for the meeting is shown in Appendix 1.

1. Welcome and call for agenda items - Reza
No items were added to the agenda.

2. Approval of Minutes - Pat
The minutes of the April 28th Chairs/Directors meeting were unanimously approved.

3. Pearson/MS Online – Pat/Kambiz
Kambiz reported that Pearson/Embanet is very interested in partnering with BCOE to market the MS Online (MSOL) Program. Pearson is the nation's largest academic publisher. Embanet is the Pearson division that provides marketing and recruitment services for on-line degree programs. They are currently partnering with about 36 universities including USC, Washington State, Boston University, Maryland and Florida. About 90% of the on-line programs proposed to Pearson are rejected so it is encouraging that they are interested in BCOE's program. If a partnership is signed, Pearson will invest over $1M in advertising and recruitment services for MSOL. Pearson expects to enroll over 80 students per year in MSOL. MSOL currently offers a Bioengineering specialization and is adding an Environmental Engr (Water) and Materials at the Nanoscale specializations next Fall. Kambiz asked Chairs to seriously consider adding other specializations. Mark suggested that Kambiz provide a written summary of the process that departments will need to follow to add MSOL specializations. Reza commented that Pearson likes BCOE's packaging of specializations (i.e., four core courses plus four specialization courses and one project course). Kambiz asked Chairs to email him MSOL specialization areas as soon as possible.

On a related matter, Walid added that UCSD offers a professional MS degree on Saturdays which is similar to an Executive MBA program. Faculty teaching courses in this program receive $16K.

4. Laptop Requirement – Pat/Reza
Pat stated that C&C will be supporting BCOE's proposed laptop requirement policy by enhancing the wifi network in and around BCOE buildings, providing BCOE course software under the campus' "Software as a Service" program and by providing a campus-level VPN server solution. These efforts are being supported using Student Technology Fee funding and should be completed by Fall 2014. In addition, C&C is providing funds to hire student helpdesk workers during the current laptop pilot programs in BIEN and ME. Reza added that BCOE student representatives have already indicated their support of this laptop policy but a meeting is being scheduled to present this program to a larger number of BCOE undergrads. Reza hopes to be able to announce this new laptop policy in June. Afterwards, a webpage will be added to BCOE's website providing details of the requirement and options on where to obtain suitable laptops. Ravi added that it would be important to have this webpage available before BCOE freshmen orientations in July.

5. Graduate Education – Mark
Mark noted the attachment to the agenda that compares BCOE grad student applications, admits, accepts and targets between May 12, 2014 and May 12, 2013. The total numbers of BCOE grad student applications, admits and accepts increased this year. The number of domestic PhD accepts increased this year but the number of international PhD accepts decreased. There are 28 international self-supporting MS students accepted plus another 32 possible accepts that still need to provide required financial documentation. It was noted that each self-supporting MS student generates $7.5K for BCOE. Mark noted that BCOE may have more grad student accepts than any other UCR college this year. There was only one MSOL application and no accepts this year (which is similar to last year at this time). Reza thanked Chairs for their successful efforts to increase the number of BCOE grad students.

6. Undergraduate Education – Ravi
Ravi noted that attachment to the agenda that lists undergraduate SIRs by BCOE Program. BCOE's incoming freshmen target this year was 400 California residents. There are a total of 503 such SIRs but this number is expected to decrease by about 9% during the summer which would result in about 450-460 incoming CA freshmen. Ravi noted that some BCOE programs exceeded their targets and some programs didn't. Waitlisted students will be admitted to programs that didn't reach their targets (i.e., EE and Environmental Engineering). Ravi will first admit waitlisted students that designated EE or Envir Engr as second choices for admission. BCOE has admitted 20 more students to EE but it's unclear how many will accept. Reza noted that some programs may be impacted by large numbers of transfer students (as CEE experienced last year). Ravi added that minimum AIS scores for some BCOE programs (i.e., CSE, BIEN and ME) will need to be increased next year to limit enrollments. This is positive since students with higher AIS scores have higher persistence rates in BCOE. Ravi noted that the average AIS scores for incoming CNAS students was 4,300 and for incoming CHASS students was 4,100 (compared to 4,545 for BCOE). Reza noted that the high numbers of applications and accepts indicates that BCOE is becoming known as being selective. Also, Reza stated that UCR exceeded its incoming freshmen target by several hundred students this year.

Ravi stated that BCOE has 60 transfer SIRs to date but that many more SIRs are expected before the 6/1/14 deadline. UCR is now getting transfer referrals from other UC campuses. BCOE admitted 10 transfer referrals last year and may have to accept transfer referrals again this year.

Ravi indicated that next year's Chinese student program with UNEX will be MS-oriented (and be similar to a 3+2 BS/MS Program). These students can transfer up to 8 units of their first year at BCOE towards an MS degree (which would take them another year to obtain). UNEX has scheduled a June 11th farewell event for this year's Chinese students.

Also, Ravi reported that over 1,000 undergrads have already used BCOE's new A+ curriculum planning tool. This on-line program offers a better predictor of course demand for departments (but does not include impacts of variables such as course failures, transfer students, changes of majors, etc).

Lastly, Ravi reminded participants that this year's BCOE Commencement is scheduled for Monday, June 16th. A large number (over 350) of undergrads are expected to graduate this year due to the enrollment bump four years ago. Dr. Ernie Levister will be this year's BCOE Commencement Speaker. There will be no BCOE Fellows named this year.

7. Faculty Recruitment Updates/Center Updates

CEE: Nosang reported that the department's Council of Advisors meeting is scheduled for May 30th. CEE is still negotiating with a senior faculty candidate. Reza added that space for new faculty is a major campus issue.

CE-CERT: Matt distributed an announcement of the May 21st Opening Ceremony for the Sustainable Integrated Grid Initiative (SIGI) and CE-CERT Open House. A CE-CERT Board of Advisors meeting is scheduled the same day. Winston Chung is scheduled to attend the SIGI Opening Ceremony.

CSE: Laxmi reported that both departmental faculty positions have been filled. The file for the senior faculty hire is being processed through CAP. This candidate wants to join CSE in July 2014.

CE: Walid stated that the program's faculty hire candidate is visiting campus for a second time today.

BIEN: Victor reported that the department's first Bioengineering Day was held on May 9th. Senior design projects were presented to industry representatives. The top project will compete with projects from other UC campuses. A provisional patent is being filed on one of the projects.

POEM: Alex stated that three UCR researchers represented the campus at the recent UC Research Communication meeting. Also, ordered equipment is currently being installed in the program's MSE lab.

EE: Jay reported that the department's annual Board of Advisors meeting is scheduled for May 16th. Two junior faculty candidates have accepted offers. An offer to a senior candidate is pending a decision on the availability of suitable space by the EVC/P.

8. Planning for EVCP/VCB Tour of BCOE – Reza

Reza indicated that the EVC/P and new VC for Budget and Planning will tour all BCOE facilities soon. A specific date has not yet known but departments should prepare for this tour as soon as possible. Maggie has sent out blank placards to FAOs that should be used to list all (faculty, staff and students) occupying wet and dry labs. The posting of this information is a safety requirement. Alex added that more space for grad students is needed. Mark reported that the proposed Interdisciplinary Research Building will contain 300,000 gross square feet but this could only provide adequate research space for around 60 new faculty. Since the Chancellor wants to hire 300 new faculty, it's unclear where the other 240 faculty will be housed.

9. College Meeting – Pat

Pat reminded participants that this year's annual College Meeting is scheduled for Monday, June 2nd from 3-5pm in WCH 205/206. Food is being ordered from California Pizza Kitchen and wine will be available. The event will start with a toast of a successful 2014 and welcome for the start of the 25th anniversary year of BCOE.

10. Other Matters   No other matters were discussed.

UNIVERSITY OF CALIFORNIA
RIVERSIDE
BOURNS COLLEGE OF ENGINEERING
Chairs' & Center Directors' Meeting

May 12, 2014
Agenda
Winston Chung Hall – Room 443

1.	Welcome - Request for Agenda Items from the Floor	Reza
2.	Approval of Minutes from April 28, 2014 Meeting	Pat
3.	Pearson/MS Online	Pat/Kambiz
4.	Laptop Requirement	Pat/Reza
5.	Graduate Education	Mark
6.	Undergraduate Education	Ravi
7.	Faculty Recruitment Updates	Chairs
8.	Center Updates	Directors
9.	Planning for EVCP/VCB Tour of BCOE	Reza
10.	College Meeting – Monday, June 2, 2014 (3-5pm)	Pat
11.	Other Matters	

Future Meeting Dates

2013	2014
Monday, August 5	Friday, January 10
Monday, September 9	Monday, January 27
Friday, September 27	Monday, February 10
Friday, October 11	Friday, February 21
Monday, October 21	Monday, March 3
Friday, November 15	Monday, March 17
Monday, December 2	Monday, March 31
Monday, December 16	Monday, April 14
	Monday, April 28
	Monday, May 12
	Friday, May 30
	Monday, June 9
	Monday, June 23
	Monday, July 7

CA Residents Only

Major	SIRs		Target	Average AIS	
Bioengineering	66	74	45	4626	4649
Bioengineering BS + MS	8			4840	
Business Informatics	10	10	10	4307	4307
Chemical Engineering	52	55	35	4596	4623
Chemical Engineering BS + MS	3			5088	
Computer Engineering	64	67	50	4468	4475
Computer Engineering BS + MS	3			4638	
Computer Science	78	91	60	4642	4662
Computer Science BS + MS	13			4780	
Electrical Engineering	49	52	60	4382	4504
Electrical Engineering BS + MS	3			4817	
Environmental Engineering	19	22	35	4484	4536
Environmental Engineering BS + MS	3			4866	
Materials Science and Engineering	18	18	25	4337	4337
Mechanical Engineering	108	114	80	4496	4506
Mechanical Engineering BS + MS	6			4691	
	503		400	4545	

Workload			
Department	SIRs	Enrolled (9% melt)	Target
BIEN	74	67	45
CEE	83	75	78
CSE	135	122	95
EE	91	83	93
ME	120	109	88
	503	458	400

CEN split 50% EE, 50% CSE
MSE split 33% EE, CEE, ME

All Admits

Major	SIRs		Target	Average AIS	
Bioengineering	69	78	45	4626	4651
Bioengineering BS + MS	9			4840	
Business Informatics	13	13	10	4307	4307
Chemical Engineering	57	60	35	4596	4621
Chemical Engineering BS + MS	3			5088	
Computer Engineering	70	73	50	4468	4475
Computer Engineering BS + MS	3			4638	
Computer Science	82	95	60	4642	4661
Computer Science BS + MS	13			4780	
Electrical Engineering	50	53	60	4382	4503
Electrical Engineering BS + MS	3			4817	
Environmental Engineering	19	22	35	4484	4536
Environmental Engineering BS + MS	3			4866	
Materials Science and Engineering	18	18	25	4337	4337
Mechanical Engineering	117	123	80	4496	4505
Mechanical Engineering BS + MS	6			4691	
	535		400	4544	

Workload			
Department	SIRs	Enrolled (9% melt)	Target
BIEN	78	71	45
CEE	88	80	78
CSE	145	131	95
EE	95	87	93
ME	129	117	88
	535	487	400

CEN split 50% EE, 50% CSE
MSE split 33% EE, CEE, ME

12-May-14

APPLICATIONS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	33	34	67	43	38	81	76	72	148
CEE	29	45	74	37	96	133	66	141	207
CEN	6	71	77	0	0	0	6	71	77
CPSC	40	548	588	35	216	251	75	764	839
ELEN	27	376	403	24	226	250	51	602	653
MSOL	1	0	1	0	0	0	1	0	1
MSE	9	47	56	23	81	104	32	128	160
MCEN	29	74	103	28	63	91	57	137	194
BCOE	174	1195	1369	190	720	910	364	1915	2279

ADMITS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	15	4	19	19	3	22	34	7	41
CEE	19	16	35	23	20	43	42	36	78
CEN	4	10	14	0	0	0	4	10	14
CPSC	14	77	91	14	41	55	28	118	146
ELEN	13	47	60	13	36	49	26	83	109
MSOL	0	0	0	0	0	0	0	0	0
MSE	5	5	10	16	4	20	21	9	30
MCEN	17	12	29	20	3	23	37	15	52
BCOE	87	171	258	105	107	212	192	278	470

ACCEPTS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	3	0	3	10	0	10	13	0	13
CEE	8	2	10	15	14	29	23	16	39
CEN	3	1	4	0	0	0	3	1	4
CPSC	6	14	20	6	13	19	12	27	39
ELEN	4	8	12	8	13	21	12	21	33
MSOL	0	0	0	0	0	0	0	0	0
MSE	2	0	2	11	4	15	13	4	17
MCEN	7	3	10	10	1	11	17	4	21
BCOE	33	28	61	60	45	105	93	73	166

Targets

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	6	6	12	9	3	12	15	9	24
CEE	4	3	7	7	7	14	11	10	21
CEN	3	7	10	NA	NA	NA	3	7	10
CPSC	10	15	25	10	15	25	20	30	50
ELEN	5	20	25	5	20	25	10	40	50
MSOL	0	0	0	0	0	0	0	0	0
MSE	5	5	10	6	6	12	11	11	22
MCEN	13	0	13	10	1	11	23	1	24
BCOE	46	56	102	47	52	99	93	108	201

13-May-13

APPLICATIONS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	40	24	64	47	31	78	87	55	142
CEE	22	57	79	41	98	139	63	155	218
CEN	7	45	52	0	0	0	7	45	52
CPSC	54	494	548	31	212	243	85	706	791
ELEN	32	391	423	31	224	255	63	615	678
MSOL	1	0	1	0	0	0	1	0	1
MSE	11	46	57	21	68	89	32	114	146
MCEN	27	69	96	14	51	65	41	120	161
BCOE	194	1126	1320	185	684	869	379	1810	2189

ADMITS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	24	6	30	29	5	34	53	11	64
CEE	13	8	21	29	26	55	42	34	76
CEN	3	14	17	0	0	0	3	14	17
CPSC	24	49	73	14	25	39	38	74	112
ELEN	9	50	59	8	33	41	17	83	100
MSOL	0	0	0	0	0	0	0	0	0
MSE	6	1	7	11	7	18	17	8	25
MCEN	18	14	32	9	3	12	27	17	44
BCOE	97	142	239	100	99	199	197	241	438

ACCEPTS

Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	8	3	11	11	3	14	19	6	25
CEE	3	1	4	10	15	25	13	16	29
CEN	0	1	1	0	0	0	0	1	1
CPSC	10	2	12	8	12	20	18	14	32
ELEN	2	12	14	2	18	20	4	30	34
MSOL	0	0	0	0	0	0	0	0	0
MSE	1	0	1	7	6	13	8	6	14
MCEN	7	1	8	5	2	7	12	3	15
BCOE	31	20	51	43	56	99	74	76	150

Targets

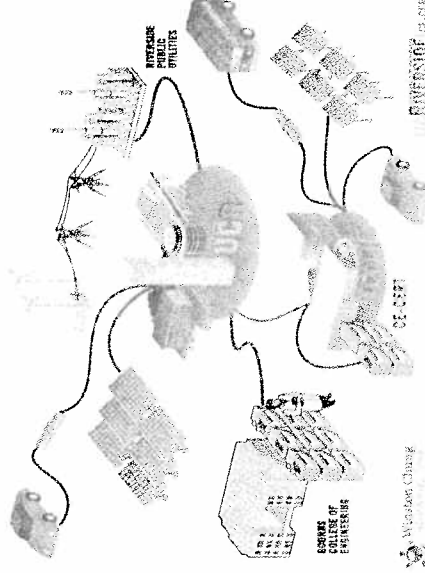| Program	MS Dom	MS Int'l	MS Total	PHD Dom	PHD Int'l	PHD Total	MS/PHD Dom	MS/PHD Int'l	MS/PHD Total
BIEN	12	3	15	12	3	15	24	6	30
CEE	3	4	7	7	8	15	10	12	22
CEN	4	4	8	NA	NA	NA	4	4	8
CPSC	8	7	15	7	8	15	15	15	30
ELEN	6	9	15	7	18	25	13	27	40
MSOL	0	0	0	0	0	0	0	0	0
MSE	3	3	6	7	5	12	10	8	18
MCEN	6	2	8	3	7	10	9	9	18
BCOE	42	32	74	43	49	92	85	81	166

UC RIVERSIDE

Introducing

Sustainable Integrated Grid Initiative

Research Towards a Sustainable Future

Integrating solar generation, smart distribution, commercial-scale energy storage, and electric transportation

The project is one step by UC Riverside to meet the University of California's President's Initiative to make the University of California carbon neutral by 2025:

University of California President's Initiative:
The First Research University to Achieve Carbon Neutrality

The University of California is a national leader in sustainability and effective actions to reduce greenhouse gases to mitigate climate change. The University galvanized its position for environmental stewardship in 2007 when all ten Chancellors became signatories to the American College & Universities Presidents' Climate Commitment. To reach our next goal, which is to bring the University to carbon neutrality in its operations by 2025, we will need to take bold efforts to change the fundamental profile of our energy sources.

SolarMax

AQMD

WATER · ENERGY · LIFE

CITY OF RIVERSIDE PUBLIC UTILITIES

Winston Battery

Winston Chung Global Energy Center

UC RIVERSIDE Bourns College of Engineering

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UNIVERSITY OF CALIFORNIA
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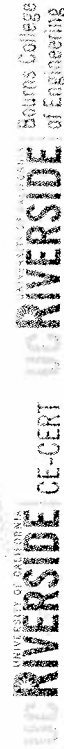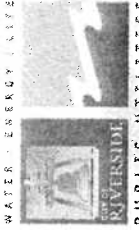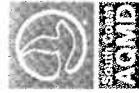
SCRISE
Southern California Research
Initiative for Solar Energy

www.cert.ucr.edu/newgrid

The Sustainable Integrated Grid Initiative will:

- Provide a unique research platform for scientists and utility companies to identify and solve potential energy problems at scale, accelerating successful integration of renewable generation technologies with energy storage and grid-connected vehicles, thereby saving untold future dollars.

- Exemplify the long-standing collaboration between academia, industry and the regulatory community. The project brings together UC researchers with major international and local industries such as Bourns, Inc., SolarMAX and Winston Battery, and public partners including the City of Riverside, Riverside Transit Agency, Riverside Public Utilities and the South Coast Air Quality Management District.

- Demonstrate the University of California's commitment to become carbon neutral by 2025 through research and implementation of novel renewable energy systems. The project will demonstrate the viability and potential efficiencies of integrated "smart" energy systems.

- Fulfill the university's and center's mission to educate by providing hands-on research opportunities for hundreds of undergraduate and graduate students.

Key Project Features:

- Four megawatts of solar photovoltaic panels
- Two megawatt-hours of battery energy storage
- Twenty-seven electric vehicle charging stations
- An electric-powered trolley service
- Energy monitoring and smart dispatch
- Open architecture designed for expansion

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The system will provide UC Riverside with renewable energy while serving as a platform to learn about how new technologies can be applied in the real world. Our research goals are to:

1. Evaluate the ability of smart grid protocols and energy storage to mitigate the impact of electric vehicle charging demand and intermittent generation on the grid.

2. Demonstrate efficiency and performance of various forms of electric and hybrid electric transportation and renewable generation operating in the Riverside community.

On average California derives two-thirds of its electricity from fossil fuels such as coal and natural gas, and the vast majority of our vehicles are powered from imported oil. Introducing renewable electricity generation and electric vehicle technologies such as plug-in hybrids are two key priorities in California's strategy to move toward domestic energy diversity and to meet our air quality and greenhouse gas goals. To meet these priorities utility providers need to ensure that bringing a significant number of fast-charging electric vehicles onto the existing grid system will not impact the local electricity demand and reliability. A key component of the UC Riverside project is to demonstrate that electric vehicles can be seamlessly introduced into the existing grid system through "smart integration" of renewable energy, storage and advanced dispatch controls.
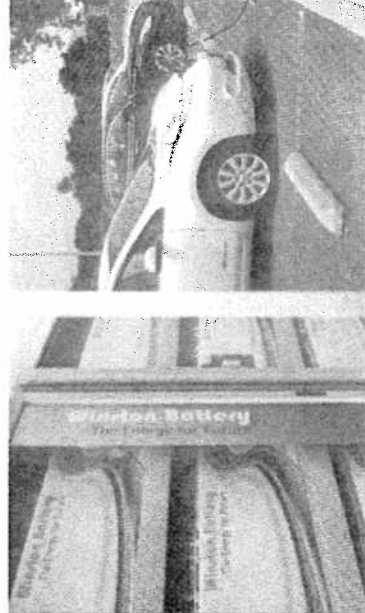
Sustainable Integrated Grid Initiative Opening Celebration
UCR Bourns College of Engineering—
Center for Environmental Research and Technology
May 21, 2014
Program

10 a.m.   Opening Ceremony Under Solar Panels
                 Master of Ceremonies:
                 Reza Abbaschian, Dean, Bourns College of Engineering
                 Remarks by:
                 The Honorable Rusty Bailey, Mayor of Riverside
                 Michael Pazzani, Vice Chancellor of Research and
                      Economic Development, UCR
                 Winston Chung, Chairman, Winston Global Energy
                 Ching Liu, Executive Vice President, SolarMax
                      Technology, Inc.
                 Gordon Bourns, Chief Executive Officer, Bourns, Inc.
                 Ben Benoit, AQMD Board Member and Mayor Pro Tem,
                      City of Wildomar
                 Matt Barth, Director, CE-CERT

10:50 a.m.   **Demonstrations and Displays**
                 Alvarez Electric Motors Company
                 Bourns, Inc.
                 Electric and Hybrid Electric Passenger Vehicles
                 Electric Trolley Ride and Drive
                 Mobile Battery Trailer and Solar Power Generation
                 Phoenix Motor Cars Electric Shuttle Bus
                 Power Quality and Harmonics Laboratory
                 Riverside Public Utilities
                 SolarMax Technology, Inc.
                 Systems Integration (Smart Grid Programming)
                 TransPower Electric Drayage Truck
                 UCR Office of Sustainability
                 Undergraduate Student Automated Vehicle
                 Undergraduate Student Solar Tracker Project
                 Winston Chung Global Energy Center

Noon   Event Concludes

UCR | OPEN HOUSE

MAY 21st, 2014 2PM to 5PM

1084 Columbia Avenue, Riverside CA 92507
www.cert.ucr.edu

You Are Invited to the
Opening Ceremony of the
Sustainable Integrated Grid Initiative

RIVERSIDE PUBLIC UTILITIES

CE-CERT

BOURNS COLLEGE OF ENGINEERING
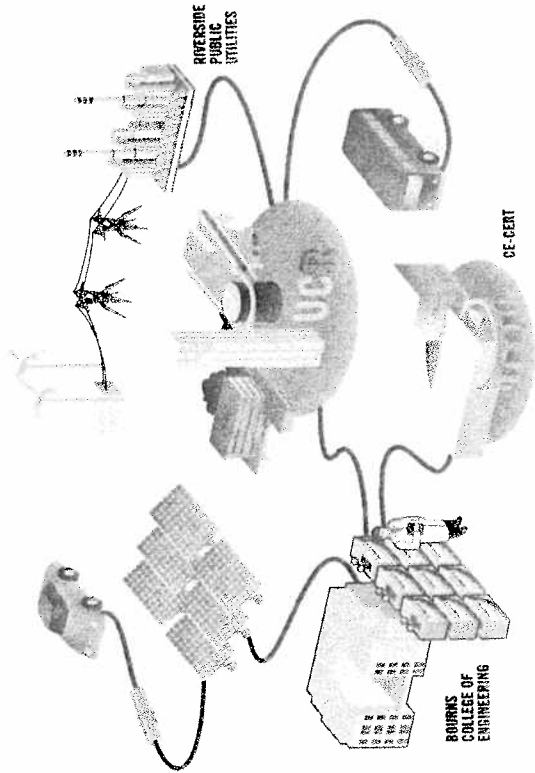
May 21, 2014
10am-noon

RSVP online: bit.ly/gridrsvp
More information: www.cert.ucr.edu/newgrid
Contact info: Steve Ramirez, 951.827.4897

UCR College of Engineering- Center for Environmental Research & Technology