## **Advanced Workshop in Regulation and Competition**

# 32nd Annual Western Conference

Hyatt Regency, Monterey, California on June 26-28, 2019

The Conference features some of the latest developments in the network industries, especially energy, including:

- > Deregulation
- ➤ Market Structure
- ➤ Policy and Regulatory Issues
- > Environmental Policy and GHG
- > Telecommunications and Water
- Pricing and Demand Response
- > Capacity and Reliability

### Who should attend:

- ➤ Industry Economists, Consultants and Attorneys
- Marketing and Regulatory Managers
- ➤ Regulatory Commission Staff

Dinner Speaker: Drew Bohan

CENTER FOR RESEARCH IN REGULATED INDUSTRIES



# CENTER FOR RESEARCH IN REGULATED INDUSTRIES

The *Center for Research in Regulated Industries*, located at Rutgers University, aims to further study of regulation in economics, finance, and institutions. Its publications, seminars, workshop, and courses make available the latest advances to academics, managers, and regulatory commission staff. The Center has over thirty five years of experience providing research, instruction, conferences, courses, seminars, and workshops in economics of network industries. The Center's *Journal of Regulatory Economics* is an international scholarly bi-monthly publication intended to provide a forum for the highest quality research in regulatory economics. Other research from the Center's programs has been published in the book series *Topics in Regulatory Economics and Policy*.

crri@business.rutgers.edu www.business.rutgers.edu/CRRI

Rutgers Business School ● 1 Washington Park, Room 1104 ● Newark, NJ 07102-1897 973-353-5761

WEDNESDAY, JUNE 26, 2019	CIXIXI – Kutgers Offiversity
2:00 – 4:30 Registration	Monterey Terrace
4:30 – 6:05 Welcome to Conference: Victor Glass	Grove Room
4:30 – 6:00 Welcome to Conference: Victor Glass	Grove Room
Karl A. McDermott Decoupling a Policy History: The long	g and Winding Road to Acceptance
	nk Investments and the Economic Foundation of Competition Law
Tim Brennan Overturning Chevron: Be Careful What You	-
Matt Coldwell Decarbonizing Transportation	
6:00 – 7:00 Cocktail Hour	Monterey Terrace
7:00 – 9:00 Dinner & <b>Keynote Speech: Drew Bohan</b>	Beach Room
9:00 – 10:00 Reception	Monterey Terrace
THURSDAY, JUNE 27, 2019	
8:30 – 10:00AM Concurrent Sessions	
Grove	Pacific
Performances Base Chair David Sannington	Safety Chair: Joseph Abbulimon
Chair: David Sappington Discussants: Carl Peterson	Chair: Joseph Abhulimen Discussants: Stephen St. Marie
Karl A. McDermott and Ross C. Hemphill: Regulatory	Ephram Glass and Victor Glass: Underground Power Lines
Risk Re-Examined	Can be the Least Cost Option
Megan Accordino, R. Jeffrey Malinak, and Ryan Hughes:	Ephram Glass and Victor Glass: How to Protect Ourselves from
The Impact of Regulatory Uncertainty on Electric Utilities,	Climate Change While Saving Money
Rate Payers, and Investors	
Ed Smeloff and Eric Woychik: Progress and Promise of	<b>Derek Fong:</b> Effect of a Thunderstorm Outflow Vortex on
Performance-Based-Ratemaking: A New Era For Electric	Overhead Electric Distribution Facilities
Utilities and Clean Energy	
10:00 – 10:20AM Coffee & Tea Break	
10:20 – Noon Concurrent Sessions	
Electricity and Gas Pricing, and Cost Allocation	Electricity Markets and Procurement
Chair: Carl Peterson	Chair: Eric Korman
Discussants: Carl Danner	Discussants: Kevin Woodruff, Jason Hansen
Paul D. Nelson: Using Flexible and Systerm Peak Generation	JP Carvallo: The Use of Market Purchases by Vertically-
Cost to Develop Cost-Based Rates	intergrated U.S.
Alberto J. Lamadrid and Tim Mount: Peak-Load Pricing	Hung-po Chao: Capacity Market With State Subsity Programs
Revisited	
Jan Grygier: Be Careful What You Ask For: Customer	Darryl Biggar and Mohammad Hesamzadeh: Generalized
Response to TOU Rates With and Without shiftable Demand Noon – 1:15PM Lunch	FTRs for Hedging Inter-Nodal Pricing Risk
1:15 – 3PM Concurrent Sessions	T
Clean Energy	Rates for Distributed Energy Resources
Chair:TBA	Chair: Cyndee Fang
Discussants: Emma Dong, Carl Danner	Discussants: Darryl Biggar
Tim Brennan: CPP vs. ACE: Economics or Ethics	Amparo Nieto: Efficient Compensatory Framework for
	Microgrids and Energy Storage for their Value as Grid and
	Capacity Resources
<b>John Higham:</b> Develop a cost-benefit analysis test for utility	Naim Darghouth: Implications of Rate Design for the Customer-
electrification programs	Economics of Behind-the-Meter Storage
Mariko Geronimo Aydin: Reinventing Demand Response	<b>Joseph Long:</b> TOU rates effect on Behind the Meter Storage Battery Investment
	Reuben Behlihomji, Erin Pulgar: Evolution of NEM Cost-Shift
3:00 – 3:15PM Break	

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3:15 – 5PM Concurrent Sessions	
Resiliency	Distributed Energy Resources
Chair: Mariko Geronimo Aydin	Chair: Margot Everett
Discussants: Mariko Geronimo Aydin	Discussants: Cyndee Fang
Jeremy Battis: Physical Security of Infrastructure	
Elizaveta Malashenko: Rethinking Utility Vegetation Management	Mark S. Martinez, Eric Woychik: Distributed Energy Optimization: Customer Value Capture with Technology Layers
R. Entriken: Resource Adequacy: History and Catalog of Metrics	Elaine Cunha: Case Study: The Impact of Solar Energy Policies in California and Lessons Learned
<b>A. Tuohy, R. Entriken:</b> Integrating Energy Analytics and Grid Reliability Tools: Linking Tools across Time and the Electricity Supply Chain	Karl Dunkle Werner: Assessment of Residential Net Metering Subsidies

FRIDAY, JUNE 28, 2019		
8:30 – 10:00AM Concurrent Sessions		
Grove	Pacific	
<b>Energy Markets-Regionalization</b>	Water	
Chair: Tim Brennan	Chair: Menahem Spiegel	
Discussants: Ryan Kurlinski	Discussants: Stephen St. Marie	
Carly J. Page: Why the West Can Succeed in Creating a Regional Wholesale Electricity Market (Even without California)	Robert Kelly: How A Tumultuous History Of Land Development Drove Water Regulatory Policy: A Florida Case Study	
Matt Arenchild and Stephen Keehn: Western EIM and Market Based Rate Authority	Janie M. Chermak and Robert H. Patrick: Water Utility Pricing: Cost Recovery and Conservation Under Uncertainty	
<b>Kevin Woodruff:</b> The Challenges of Tracking and Forecasting Electric Sector Greenhouse Gas Emissions: A Survey of California Policies and Methods	<b>Eric Woychik:</b> New On-time Locational Technology: Co-Optimized Solutions for the Water-Energy Nexis	
10 – 10:30AM Coffee and Tea Break, & Check out		
10:30 – 12:15PM Concurrent Sessions		
<b>Energy Markets-Renewables</b>	Rate Design Policy	
Chair: Megan Accordino	Chair: Paul Nelson	
Discussants: Kevin Woodruff, Darryl Biggar	Discussants: Trina Horner	
<b>Emma Dong:</b> The Cost of Wind Intermittency: Evidence From Texas	Mariko Geronimo Aydin: Rate Design for the Digital Age	
Erik Ela and Udi Helman: Wholesale Electricity Market Design Initiatives in the United States: Survey and Research Needs	Margot Everett, Cyndee Fang, Andre Ramirez: A Modern Rate Architecture for California's Future	
Andrew Mills: How Much Are Wind and Solar Driving Changes in Wholesale Power Prices?	John Higham: Transitioning to Modern Rate Designs	
Hung-po Chao: Demand Response for Clean Power Under Uncertainty		
12:15 –12:20 Concluding Remarks – Victor Glass		

### **SPEAKERS DISCUSSANTS & CHAIRS**

Joseph Abhulimen, Program/Project Supervisor, CPUC

Megan Accordino, Manager, Analysis Group

Anthony Alvarez, Utility Analyst, Indiana Office of the Utility Consumer Counselor

Matt Arenchild, Managing Director, Navigant Mariko Geronimo Aydin, The Brattle Group Jeremy Battis, Risk and Safety Analyst, CPUC

Ruben Belihomji, Financial Analyst, Southern California Edison Darryl Biggar, Australian Competition and Consumer Commission Drew Bohan, Executive Director, California Energy Commission Tim Brennan, University of Maryland Baltimore County

JP Carvallo, Sr. Scientific Engineering Associate, Lawrence Berkeley National Laboratory

Edward Cazalet, CEO TeMIX Inc.

**Hung-po Chao,** Chief Economist and Senior Director Economics – Operations and Markets, PJM Interconnection

Janie M. Chermak, Professor, University of New Mexico

Matt Coldwell, Manager, Demand Analysis, California Energy Commission

Elaine Cunha, The Brattle Group

Carl Danner, Managing Director, Berkeley Research Group

Naim Darghouth, Research Associate, Lawrence Berkeley National Laboratory Emma Dong, Associate, Analysis Group

#### **32nd Annual Western Conference**

Erik Ela, Senior Technical Leader, EPRI

Robert Entriken, Principal Technical Leader, EPRI

Margot Everett, Director, Navigant

Cyndee Fang, Manager of Customer Pricing, SDG&E

Derek Fong, Senior Utilities Engineer, CPUC

William Fuller, Regulatory Business Manager, San Diego Gas and Electric

Ephram Glass, Consultant

Victor Glass, Director CRRI and Professor of Professional Practice, Rutgers University

Jan Grygier, Principal Data Scientist, PG&E

Jason Hansen, Senior Economist, Idaho National Laboratories

Udi Helman. Consultant

John Higham, The Brattle Group

Trina Horner, Director 'Energy', Navigant

Ryan Hughes, Associate, Analysis Group

Raminder Kahlon, Director of the Water Division, CPUC

Dennis Keane, Senior Manager, Rate Design and Quantitative Analysis, PG&E

Stephen Keehn, Associate Director, Navigant

Robert Kelly, Vice President, Regulatory Affairs, SouthWest Water Company

Eric Korman, Vice President, Analysis Group

Ryan Kurlinski, Manager, Analysis and Mitigation Group, CAISO

Alberto J. Lamadrid, Associate Professor of Economics, Lehigh University

Joseph Long, Energy Economics Analyst, Aspen Environmental Group

Elizaveta Malashenko, Director, Safety Enforcement Division, CPUC

R. Jeffrey Malinak, Managing Principal, Analysis Group Inc.

Mark S. Martinez, Manager, Emerging Markets & Technologies, Southern California Edison

Karl A. McDermott, Ameren Professor of Government and Business, University of Illinois-Springfield

Andrew Mills, Research Scientist, Lawrence Berkely National Laboratory

Gwen Morien, Rate Strategy Project Manager, San Diego Gas and Electric

Tim Mount, Professor, Cornell University

Paul D. Nelson, Consultant, Barkovich and Yap

Amparo Nieto, Senior Vice President, Economists Inc.

Carly J. Page, Economist, Public Utilities Commission of Nevada

Samantha Pate, Sr. Regulatory Manager, San Diego Gas and Electric

Robert H. Patrick, Associate Professor, Rutgers University

Erin Pulgar, Project Manager, SCE

Nguyen Quan, Manager, Regulatory Affairs, Golden State Water Company

**Andre Ramirez** 

David Sappington, Professor, University of Florida

Ed Smeloff

Menahem Spiegel, Professor, Rutgers Business School

Jeff Stein, Manager, Customer Pricing, San Diego Gas and Electric

Aidan Tuohy, Senior Project Manager, EPRI

Karl Dunkle Werner, The Brattle Group

Kevin Woodruff, Woodruff Expert Services

Eric Woychik, Senior Vice President, Willdan Group

#### **ORGANIZING COMMITTEE**

Matthew Arenchild (Navigant Consulting, Inc.)

Carl Danner (Berkeley Research Group)

Robert Entriken (EPRI)

Cynthia Fang (San Diego Gas and Electric)

Ahmad Faruqui (The Brattle Group)

Victor Glass (Rutgers University)

Rami Kahlon (California Public Utilities Commission)

Dennis Keane (Pacific Gas and Electric)

Eric Korman (Analysis Group)

Paul Nelson (Barkovich and Yap)

Amparo Nieto (Economists Inc.)

Ryan Kurlinkski (CAISO)

Kevin D. Woodruff (Woodruff Expert Services)

#### **HOTEL RESERVATIONS**

Sufficient Rooms are reserved at the Hyatt Regency Monterey for all of the Conference participants. Reservations should be received by May 26, 2019. Hotel reservation can be made by

## **CRRI - Rutgers University**

using the following Passkey Link:

https://www.hyatt.com/en-US/group-booking/MRYDM/G-RUT6

#### Regency Monterey

1 Golf Course Road Monterey, California, 93940, USA *1-888-421-1442* 

If you are not making reservations through the link above please identify yourself as being held under the group block: Rutgers University CRRI Program.

#### **32nd Annual Western Conference**

#### **CONTACTING CRRI**

Victor Glass, Director - CRRI and Professor of Professional

Practice, Rutgers University

Home Page: www.business.rutgers.edu/CRRI

Address: Center for Research in Regulated Industries

Rutgers Business School, Rutgers University,

1 Washington Park, Room 1120 Newark, NJ 07102-1897

Phone: 973-353-5761

Email: <u>vglass@business.rutgers.edu</u> (Victor Glass)

cri@business.rutgers.edu (CRRI Admin Asst)

Signature of Participant:

REGISTRATION INFORMATION

### **CRRI – Rutgers University**

**To Register:** Please complete and return the form to CRRI. Registrations are accepted by mail, email, fax, and telephone. Please confirm telephone registrations by sending in a completed and signed registration form. The deadline for registrations is May 24, 2019. Registrations received after May 24, 2019 will be admitted on a space available basis.

**Volume discount:** Second and subsequent applications received in the same envelope, fax, email, or made at the same time by phone will receive a 5% volume discount.

**Payment Information:** Make checks payable to "**Rutgers University**" and mail to the attention of at the above address. Fees include prescribed learning materials, dinner on Wednesday night, June 26, 2019, all receptions and coffee breaks, but do not include lodging and other meals. The government registration fee is available for government employees.

## **REGISTRATION FORM: 32nd Annual Western Conference** Name Title: Company: Complete Address: Telephone: Fax: Email: Billing Information: \_\_ Payment enclosed \$1,135 U.S. Dollars GOVERNMENT RATE: Government employees may apply for reduced enrollment fees. Send invoice to participant at above address. I would like to apply for the govt rate of \$610 Send invoice to Credit Card: \_\_\_VISA \_\_\_ MC Exp. \_\_\_/\_\_\_ CVC Code: Card # CANCELLATION POLICY: Until May 9, 2019 cancellation is allowed without penalty and refunds will be allowed in full. After this date, the indicated fee is due in full whether or not the participant actually attends. Substitutions may be made at any time.