

## FROM THE PRESIDENT...

It is my pleasure to share with you all of the great things happening at AERE!

### New AERE Journal

Of course, the most important and enduring change this year was the culmination of several years of deliberations on the future of the *Journal of Environmental Economics and Management (JEEM)* that resulted in the withdrawal of AERE's support from *JEEM* and the creation of a new AERE-owned journal: *Journal of the Association of Environmental and Resource Economists (JAERE)*. I hope all the members of AERE appreciate the hard work that went into this by AERE officers and Board members, and I want to thank those of you who took the time to give us your thoughts on a series of important questions posted on the web, ending with the naming of the new journal. Also, I want to particularly cite Don Fullerton (University of Illinois), Joe Herriges (Iowa State University), and Chuck Mason (University of Wyoming) for agreeing to be interim editors of the new journal until Dan Phaneuf's (University of Wisconsin, Madison) contract with Elsevier ends on December 31, 2013 and he takes over editorial leadership. The plan is for our affiliation with *JEEM* to formally end after the May 2014 issue, when it will no longer carry our endorsement or our "tree" logo. Sometime before the end of May, the University of Chicago Press (UCP), our publisher of *JAERE*, will release the first printed issue. The plan is to come out with at least two more issues over the rest of the year. We are pushing hard for issues to be able to get an impact factor as quickly as possible. As for availability of *JEEM* and *JAERE* to the membership, *JAERE* will be made available on-line to all members free of charge and at a discount if you want a print version. *JEEM* will be available at a discount to AERE members through the 2014 issues.

Please make it a top priority to support *JAERE* by submitting your best papers to it and encouraging your colleagues to do the same! If you have a paper you would like to have considered for one of the early issues, please contact Don Fullerton (at [dfullert@illinois.edu](mailto:dfullert@illinois.edu)) until Dan takes over in January. We'll have the UCP process set up soon. Also, as Dan builds his editorial team, please be willing to serve and to review papers if asked.

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## AERE Summer Conference

As for meetings, we continued our tradition of wonderful venues for the AERE Summer Conference at The Banff Center in the Canadian Rockies. While it wasn't that easy to get to, once there the area provided spectacular views, amazing hiking and jogging trails, excellent food, great music, the incomparable Lake Louise, and numerous other fun things to do. The meetings themselves were a huge success with 300 attendees spread over ten comfortable meeting rooms, some of which afforded many distractions, from moose to mountain views! Be sure and thank the organizing committee, co-chaired by Vic Adamowicz (University of Alberta) and Ujjayant Chakravorty (Tufts University), with support from Carolyn Fischer (Resources for the Future) and Brian Murray (Duke University). They put together an outstanding program of close to 250 selected papers in the General Sessions, eight papers in the Sponsored Sessions (thanks to funding support from the National Oceanic and Atmospheric Administration and the USDA Economic Research Service), and nine papers selected (out of 100 submissions) for the graduate student sessions. Please also thank Paul Ferraro (Georgia State University) and Dan Millimet (Southern Methodist University) for their leadership of the sold out pre-conference workshop, "Recent Advances in Program and Policy Evaluation." We were also very fortunate to hear a very interesting and entertaining talk on the history of water by Professor James Salzman (Duke). Following his presentation, we ended the session with the annual AERE Awards Program—presiding over it is one of the best parts of being AERE president.

## AERE 2012 Awards

**AERE Fellow** awards were presented to: Lawrence H. Goulder (Stanford University), John Loomis (Colorado State University), and Robert S. Pindyck (Massachusetts Institute of Technology). Two papers were honored with the **Publication of Enduring Quality (PEQ)** award: "Economic Growth and the Environment" by Gene M. Grossman and Alan B. Krueger, *Quarterly Journal of Economics*, volume 110 (2): pp. 353-377, 1995 and "Is Free Trade Good for the Environment?" Werner Antweiler, Brian Copeland, and M. Scott Taylor, *American Economic Review*, Volume 91 (4): pp. 877-908, 2001. **The Ralph C. d'Arge and Allen V. Kneese Award for Outstanding Publication in the *Journal of Environmental Economics and Management (JEEM)*** was given for: "Kyoto and the Carbon Footprint of Nations" by Rahel Aichele and Gabriel Felbermayr, University of Munich, Germany, volume 63 (3): pp. 336-354, 2012.

## AERE Sessions at Upcoming Meetings

The next big event for AERE members is the **Allied Social Science Associations (ASSA)** annual meeting in Philadelphia, Pennsylvania on January 3-5, 2014. The Program Committee chaired by Antonio Bento (Cornell University) with Josh Graff Zivin (University of California, San Diego) and Meredith Fowlie (University of California, Berkeley) has put together nine sessions for AERE. And please sign up for the AERE lunch on January 4<sup>th</sup>! I'm very happy to report that Marty Weitzman (Harvard) will be giving the annual AERE Fellow Talk at the lunch. There are also AERE sessions coming up in November at the **Southern Economic Association** meeting in Tampa, Florida with thanks to John Whitehead (Appalachian State University) and Lea-Rachel Kosnick (University of Missouri-St. Louis) and, for the first time, at the **Midwest Economic Association** meeting in Evanston, Illinois in March--thanks again to Lea-Rachel! In addition, the call for papers is open for the **Agricultural & Applied Economic Association** summer meeting in Minneapolis, Minnesota next year and for the **ASSA** January 2015 meeting in Boston (See details in this issue.) Please note that because the dates conflict with the WCERE, there are no AERE sessions at the WEAI next summer.

## World Congress of Environmental and Resource Economists (WCERE)

Next summer, the fifth WCERE takes place in Istanbul, Turkey on June 28-July 2, 2014. The call for papers is now open. Ozgur Kayalica (Istanbul Technical University) is chairing the Local Organizing Committee—you may have met him or seen him in Banff at his presentation prior to the Keynote. Please see additional information on page 10 of this newsletter.

As announced in the May newsletter, we are taking applications for hosting and planning the 2015 AERE Summer Conference. (We skip a year because of the World Congress in 2014.) No one has yet come forth with a concrete proposal for a site. We are thinking we should go out to the U.S. West Coast this time, but will entertain all ideas. Please contact me if you are interested in this opportunity. It is important to decide on the city so we can reserve the venue and get started on the program planning.

**Alan J. Krupnick**  
**AERE President**  
**Resources for the Future**  
**Krupnick@rff.org**  
**Office phone: 202-328-5107**

## AERE NEWS

### AERE BOARD OF DIRECTORS MEETING

The AERE Board Meeting will be held on **Friday, January 3, 2014, from 5:30 – 8:30 p.m.** at the Philadelphia Marriott Downtown — Meeting Room 308

Anyone with matters to be brought before the Board should contact the president:

**Alan J. Krupnick**  
**Resources for the Future**  
**1616 P Street NW**  
**Washington, DC 20036**  
**Krupnick@rff.org**  
**Office phone: 202-328-5107**

### AERE ELECTION

All 2013 AERE members are eligible to vote in this year's election for President, Vice President, and two new members of the Board of Directors. The ballot information was sent via email from [info@aere.org](mailto:info@aere.org) on October 14<sup>th</sup> along with the biographical sketches submitted by each candidate. AERE Vice President Don Fullerton, Kathleen Segerson, and Jay Shogren have put together an excellent slate of candidates. Please remember to cast your vote **by December 1st**. Questions regarding the on-line election process should be directed to: [info@aere.org](mailto:info@aere.org).

### AERE LUNCHEON AND BUSINESS MEETING

The AERE Luncheon and Business Meeting with AERE Fellow Talk by Martin Weitzman, Department of Economics, Harvard University, will be held on **Saturday, January 4, 2014, from 12:15 – 2:15 p.m.**, at the Philadelphia Marriott Downtown – Independence Ballroom I and II.

Luncheon reservations can be made online at: [www.aere.org](http://www.aere.org). The deadline to guarantee your reservation at this popular event is **Friday, December 20, 2013, 5:00 p.m. EST**. Please direct questions to: [info@aere.org](mailto:info@aere.org).

### AERE FELLOWS 2013 CALL FOR NOMINATIONS

This program recognizes outstanding contributions to the field by members of the association. The 2013 AERE Fellows will be announced at the AERE Luncheon during the World Congress of Environmental and Resource Economists (WCERE) in Istanbul, Turkey in 2014. (Note: There is no AERE Summer Conference in years when the WCERE is held.)

**Criteria:** Awardees will have demonstrated a significant contribution to the advancement of the profession of environmental and resource economics. A candidate must be living at the time of nomination; membership in AERE is not required.

**Nomination Process:** Any member of AERE may nominate a candidate for Fellow. A nomination packet should include a vita of the nominee, a two-page nomination letter outlining what contributions the individual has made that warrant the award, and at least one additional letter of support from a second individual.

In addition, members of the AERE Board of Directors may consider candidates that have not been otherwise nominated that they feel are especially worthy.

**Selection Process:** Nomination packages are to be submitted **by December 1, 2013**, to:

**Dr. Alan J. Krupnick**  
**AERE President**  
**Resources for the Future**  
**1616 P Street NW**  
**Washington, DC 20036**  
**[Krupnick@rff.org](mailto:Krupnick@rff.org)**  
**Office phone: 202-328-5107**

The president will distribute copies to each of the Board members who will select newly appointed Fellows from the set of nominations. Newly elected Fellows will be notified in advance to provide ample time to make travel arrangements to attend the Awards Program. In future years, a separate Fellows Committee may be impaneled to aid in the initial screening of candidates.

**Maximum Number of Awards:** Three for 2013

### **Inaugural AERE Fellows 2005**

Maureen L. Cropper  
W. Michael Hanemann  
Karl-Göran Mäler  
Wallace E. Oates  
V. Kerry Smith  
Tom Tietenberg

### **AERE Fellows 2006**

Richard C. Bishop  
Nancy E. Bockstael  
Ronald G. Cummings  
Anthony (Tony) C. Fisher  
Geoffrey M. Heal  
Clifford S. (Cliff) Russell

### **AERE Fellows 2007**

Daniel W. Bromley  
Gardner M. Brown, Jr.  
Charles W. (Chuck) Howe  
Kenneth E. (Ted) McConnell  
Kathleen Segerson  
David Zilberman

### **AERE Fellows 2008**

Thomas Crocker  
A. Myrick Freeman III  
Alan Randall

### **AERE Fellows 2009**

Richard T. Carson  
Charles D. Kolstad  
Robert N. Stavins

### **AERE Fellows 2010**

Alan J. Krupnick  
Stephen Polasky  
Martin L. Weitzman

### **AERE Fellows 2011**

Trudy Ann Cameron  
William D. Nordhaus  
James Wilen

### **AERE Fellows 2012**

Lawrence H. Goulder  
John B. Loomis  
Robert Pindyck

## **AERE PUBLICATION OF ENDURING QUALITY AWARD 2013 CALL FOR NOMINATIONS**

The AERE Board of Directors will present the annual award (to co-authors if appropriate) for a publication of enduring quality that appeared at least five years prior to the year of the award. Nominated works are to be evaluated on their seminal nature and enduring value. Place and type of publication are unrestricted but posthumous awards will not be given. Nominees may include individuals who are not members of AERE.

Evaluation of nominated works and final selection for the 2013 award will be undertaken by a committee chaired by James Wilen (University of California, Davis). Nomination packages should consist of four copies each of a cover letter, a document supporting the nomination, and the publication itself. The supporting document (not to exceed three pages) should include quantitative as well as qualitative information (e.g., number of citations or copies printed). Nominations should be sent to arrive no later than **December 1, 2013**. This is an important award for AERE and for the recipients. Please give serious consideration to nominating a publication and to observing the submission requirements.

**Prof. James E. Wilen**  
University of California, Davis  
[wilen@primal.ucdavis.edu](mailto:wilen@primal.ucdavis.edu)  
Subject Line: AERE PEQ Award

## **BEST *JEEM* PAPER 2013**

### **Call for Nominations**

AERE presents the “Ralph C. d’Arge and Allen V. Kneese Award for Outstanding Publication in the *Journal of Environmental Economics and Management*,” to recognize an exemplary research paper published in *JEEM* during the past year.

**Criteria:** Any article published in calendar year 2013, that is, v64 (January, March, May issues) and v65 (July, September, November issues) of *JEEM* is eligible for this award. There is no requirement that the author(s) be a member of AERE.

**Nomination Process:** Any current member of AERE may nominate an article. The nomination should be submitted in a letter that briefly describes why the nominator believes the paper is deserving of this award.

Letters of nomination should be submitted by **December 31, 2013** to:

**Dr. Daniel J. Phaneuf**  
**University of Wisconsin-Madison**  
**Department of Agricultural and Applied Economics**  
**Taylor Hall**  
**Madison, WI 53706-1503**  
**Email: [dphaneuf@wisc.edu](mailto:dphaneuf@wisc.edu)**  
**Subject Line: Best *JEEM* Paper**

**Selection Process:** The winner of the award will be selected by a three-person selection committee comprised of the editor of *JEEM* (Dan Phaneuf, University of Wisconsin-Madison), one AERE representative (Junjie Wu, Oregon State University), and one associate editor of *JEEM*. The author(s) will be notified by March 1, 2014 to provide ample time to make travel arrangements to attend the Awards Program at the AERE luncheon scheduled during the World Congress of Environmental and Resource Economists in Istanbul, Turkey, June 28 – July 2, 2014.

### **CALL FOR PROPOSALS FOR THE ORGANIZING COMMITTEE OF THE FOURTH ANNUAL AERE SUMMER CONFERENCE**

The Association of Environmental and Resource Economists (AERE) solicits proposals for the Organizing Committee of the Fourth Annual AERE Summer Conference. In addition to selecting the conference location, venue, and dates in early June, the Committee will develop the academic programming and related events. The theme of the sponsored sessions is intended to be chosen by the organizing committee in conjunction with sponsors of the sponsored session track.

Proposals are solicited from universities, research organizations, or groups of organizations. Normally a team of two to three individuals would be expected to comprise the committee, but the organizing committee has latitude to choose its composition as it sees fit. More information about the AERE Summer Conference and the role of the Organizing Committee can be found at the official AERE web site: <http://www.aere.org>.

Proposals should be sent by e-mail to the President of AERE, Alan Krupnick ([Krupnick@rff.org](mailto:Krupnick@rff.org)), by **January 31, 2014**.

### **AERE REPRESENTATIVE TO THE EAERE**

AERE member Edward B. Barbier is now serving as the U.S. representative to the European Association of Environmental and Resource Economics (EAERE). In that capacity, he invites AERE members to contact him about any issue that they would like him to bring to EAERE's attention, or concerning environmental economics in Europe in general. Barbier spent 21 years in Europe and is very familiar with various institutions and research groups.

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### **AERE MEMBERSHIP OPTIONS**

AERE membership rates for 2014 remain the same. Please renew your membership now and take advantage of the three-year payment plan! Discounted rates are available for students as well as individual residents of low, lower-middle, and upper-middle income countries in accordance with the definition provided by the World Bank. Membership will include a free electronic subscription to JAERE effective May 2014.

AERE also invites colleges, universities, and university research centers to become University Members of AERE and research institutions, nonprofit organizations, government agencies, and corporations to become Institutional Members of AERE.

To become a **University Member** of AERE, a contribution of \$350\* is required. With this contribution, colleges and universities:

- may designate one person (or up to four students) to receive a 2014 individual membership in AERE. Benefits include an electronic subscription to the *Review of Environmental Economics and Policy (REEP)* and (effective May 2014) AERE's new journal, the *Journal of the Association of Environmental and Resource Economists (JAERE)*. Please see the complete listing of membership benefits on the AERE web page.

- are entitled to a sponsorship listing on the AERE Web page ([www.AERE.org](http://www.AERE.org)) and in the *AERE Newsletter* and *JAERE*;
- will receive one free advertisement on the AERE Web page and in the *AERE Newsletter* for the calendar year (a savings of \$250).

To become an **Institutional Member** of AERE, a contribution of \$1,000\* is required. With this contribution, institutions receive the above benefits plus:

- two nontransferable tickets for institution staff to the annual AERE Business Meeting and Luncheon at the ASSA meeting in Boston, Massachusetts in January 2015;
- recognition at the annual AERE Business Meeting and Luncheon at the ASSA meeting.

\*Note: A discounted rate of \$100 for University and Institutional membership with some benefits (see the AERE web page under "Membership") is available for organizations located in low, lower-middle, and upper-middle income countries in accordance with the definition provided by the World Bank.

## *AERE Newsletter*

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## **AERE MEMBERSHIP SERVICES**

Please direct any questions or requests regarding your membership, subscriptions to *REEP*, luncheon or AERE Conference registrations, receipts, or related membership matters to:

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AERE Membership Services  
13006 Peaceful Terrace  
Silver Spring, MD 20904  
[info@aere.org](mailto:info@aere.org)  
Telephone: 202-559-8998  
Fax: 202-559-8998

Marilyn M. Voigt, AERE Executive Director, can be reached at:

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1616 P Street NW, Suite 600  
Washington, DC 20036-1400  
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Telephone: 202-328-5125

## 2013 INSTITUTIONAL AND UNIVERSITY MEMBERS OF AERE

### Institutional Members

Environmental Defense Fund – EDF

Rocky Mountain Research Station, U.S.F.S.

Fondazione Eni Enrico Mattei – FEEM

Stratus Consulting

Resources for the Future

W.H. Desvousges and Associates, Inc.

### University Members

Appalachian State University  
Department of Economics

University of Delaware  
School of Marine Science and Policy

Clark University  
Department of Economics

University of Hawaii at Manoa  
Department of Economics

Duke University  
Duke University Energy Initiative

University of Maine  
School of Economics

Georgia State University  
Department of Economics

University of Maryland – College Park  
Department of Agricultural & Resource Economics

Harvard University  
Harvard Environmental Economics Program

University of Michigan  
ERB Institute for Global Sustainable Enterprise

Iowa State University  
Department of Economics

University of North Carolina at Greensboro  
The Bryan School of Business and Economics

Massachusetts Institute of Technology  
Department of Economics

University of Oregon  
Department of Economics

Mississippi State University  
Department of Agricultural Economics

University of Tennessee  
Department of Economics

University of California, Berkeley  
Agriculture and Resource Economics

Virginia Tech  
Department of Agricultural & Applied Economics

University of Connecticut  
Department of Agricultural and Resource Economics



## CALLS FOR PAPERS

### ***AERE NEWSLETTER***

The *AERE Newsletter* is soliciting essays from AERE members about natural resource and environmental economics issues of general interest to the membership. These essays can be relatively short (6-10 double spaced pages) and address a topic that does not fit into the traditional journal outlet. There is currently no backlog, so your essay would likely be published in the November *AERE Newsletter*. Marilyn Voigt and I need your essay by August for the November issue. If you wish to float an idea by me, feel free to contact me.

**John Loomis**  
**AERE Newsletter Co-Editor**  
[jloomis@lamar.colostate.edu](mailto:jloomis@lamar.colostate.edu)  
**Telephone: 970-491-2485**

### **AGRICULTURAL & APPLIED ECONOMICS ASSOCIATION (AAEA)**

**July 27 – 29, 2014**  
**Minneapolis, Minnesota**

#### **Call for Papers: AERE Sessions**

The 2014 Agricultural & Applied Economics Association (AAEA) Annual Meeting will be held in Minneapolis, Minnesota on July 27 – 29, 2014. The AERE Program Committee chaired by Josh Graff Zivin (University of California, San Diego) will organize AERE sessions.

Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. Josh Graff Zivin**  
**University of California, San Diego**  
**Email: [jgraffzivin@ucsd.edu](mailto:jgraffzivin@ucsd.edu)**

**Subject Line: AERE AAEA--Surname of corresponding author**

The deadline to submit is **January 15, 2014**. Only .pdf files will be accepted as electronic format. No submissions will be accepted via fax or postal mail. Abstracts cannot be jointly considered for inclusion in AERE sessions and in sessions sponsored by other associations at the AAEA-CAES meeting.

Files should be sent by the proposed presenter, who will be the contact for correspondence. No more than one submission will be accepted per presenter. The file must provide the following information according to the following format:

- (I) name and institutional affiliation of paper presenter and co-author(s);
- (II) title of paper;
- (III) mailing address and e-mail address of paper presenter;
- (IV) up to six key words;
- (V) JEL codes;
- (VI) long abstract of the paper containing no more than 1,000 words, along with a word count;
- (VII) references.

The total file length should be two to three pages, with a maximum of three pages, including all of the required information. Papers submitted without all of the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters. Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit complete information for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2014 AERE members and priority consideration for discussants will be given to current AERE members.

### **ALLIED SOCIAL SCIENCE ASSOCIATIONS (ASSA)**

**January 3 – 5, 2015**  
**Boston, Massachusetts**

#### **Call for Papers: AERE Sessions**

The 2015 annual winter meeting of the ASSA will be held in Boston, Massachusetts on January 3 - 5, 2015. The AERE Program Committee chaired by Josh Graff Zivin (University of California, San Diego) will organize AERE sessions.



Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. Josh Graff Zivin**

**University of California, San Diego**

**Email:** [jgraffzivin@ucsd.edu](mailto:jgraffzivin@ucsd.edu)

**Subject Line:** AERE ASSA--Surname of corresponding author

The deadline to submit is **April 15, 2014**. All submissions are to be sent electronically via e-mail. Only .pdf files will be accepted as electronic format. No submissions will be accepted via fax or postal mail. Abstracts cannot be jointly considered for inclusion in AERE sessions and in sessions sponsored by other associations at the ASSA meetings (e.g., general AEA sessions).

Files should be sent by the proposed presenter, who will be the contact for correspondence. No more than one submission will be accepted per presenter. The file must provide the following information according to the following format:

- (I) name and institutional affiliation of paper presenter and co-author(s);
- (II) title of paper;
- (III) mailing address and e-mail address of paper presenter;
- (IV) up to six key words;
- (V) JEL codes;
- (VI) long abstract of the paper containing no more than 1,000 words, along with a word count;
- (VII) references.

The total file length should be two to three pages, with a maximum of three pages, including all of the required information. Papers submitted without all of the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters.

Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit complete information for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2015 AERE members and priority consideration for discussants will be given to AERE members.

## **SOUTHERN ECONOMIC ASSOCIATION (SEA) ANNUAL MEETING**

**November 22-24, 2014**

**Marriott Marquis Atlanta  
Atlanta, Georgia**

### **Call for Papers: AERE Sessions**

The SEA 2014 Annual Meeting will be held November 22-24, 2014 (Saturday through Monday) at the Tampa Marriott Waterside Hotel and Marina in Tampa, Florida. Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. John Whitehead**

**Appalachian State University**

**Email:** [whiteheadjc@appstate.edu](mailto:whiteheadjc@appstate.edu)

**Subject Line:** AERE SEA

Deadline to submit is **March 1, 2014**. Files should be sent by the proposed presenter who will be the contact for correspondence. The file should contain the following information:

1. Author's (and co-author's) name, address, affiliation, telephone number, and e-mail address.
2. Title of paper.
3. Abstract of no more than 100 words.
4. JEL codes.

Papers submitted without all the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters. Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit abstracts for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2014 AERE members and priority consideration for discussants will be given to current AERE members.

# 5<sup>TH</sup> WORLD CONGRESS OF ENVIRONMENTAL AND RESOURCE ECONOMISTS (WCAERE)



**June 28 – July 2, 2014  
Istanbul, Turkey**

The 5th World Congress of Environmental and Resource Economists (WCERE) will take place in Istanbul, Turkey, from June 28 to July 2, 2014. After Venice (1998), Monterey (2002), Kyoto (2006), and Montréal (2010), the profession will convene in this unique World Heritage city that straddles Europe and Asia. [www.wcere2014.org](http://www.wcere2014.org)

Hosted by Istanbul Technical University (ITU) <http://www.itu.edu.tr/en/>, WCERE 2014 is jointly organized by Association of Environmental and Resource Economists AERE at <http://www.aere.org> and European Association of Environmental and Resource Economists (EAERE) at <http://www.eaere.org>, in cooperation with the East Asian Association of Environmental and Resource Economists (EAAERE) at <http://www.eaaere.org>

You are invited to submit theoretical and empirical papers in all areas of environmental and natural resource economics for presentation at the World Congress. Papers are to be submitted through the conference web-site, [www.wcere2014.org/en/Call-for-Papers.html](http://www.wcere2014.org/en/Call-for-Papers.html)

The deadline for complete submissions is **15 January, 2014**.

Notification of the outcome of the peer review process is scheduled for **1 April, 2014**.

The number of submissions per person is unlimited but the maximum number of presentation per person will be limited to one. Authors must be registered for the Congress **by April 30, 2014** in order for their paper to be included in the program. All further details of the submission procedure can be found on the Conference web-

site at <http://www.wcere2014.org>. Please also note the separate call for thematic and policy sessions.

## **WCERE 2014 Scientific Programme Committee Co-Chairs:**

Mark Cohen, Vanderbilt University  
Timo Goeschl, Heidelberg University  
Erinç Yeldan, Yasar University

## **Keynote Speakers:**

Robert H. Frank, Cornell University  
Matt Kahn, University of California, Los Angeles  
E.S. Somanathan, Indian Statistical Institute

## **Local Organising Committee Chair:**

M. Özgür Kayalica, Istanbul Technical University

Further information is available at the conference website [www.wcere2014.org](http://www.wcere2014.org) or by writing to [scientific@wcere2014.org](mailto:scientific@wcere2014.org)

## **Important Deadlines:**

Early bird registrations end on April 30  
[>](http://www.wcere2014.org/en/Registration.html)

1 December, 2013

Deadline for thematic sessions submission  
<http://www.wcere2014.org/en/Thematic-Sessions.html>  
and policy sessions submission  
<http://www.wcere2014.org/en/Policy-Sessions.html>

15 December, 2013

Notifications of acceptance of thematic sessions

15 January, 2014

Deadline for papers submission  
[>](http://www.wcere2014.org/en/Call-for-Papers.html)

31 March, 2014

Notifications of acceptance of papers

30 April, 2014

Early registration deadline  
[>](http://www.wcere2014.org/en/Registration.html) -  
Deadline by which presenting authors must be registered for inclusion in the programme

31 May, 2014

Preliminary programme release  
<http://www.wcere2014.org/en/Scientific-Programme.html>

# CONFERENCES, MEETINGS, AND WORKSHOPS

## ALLIED SOCIAL SCIENCE ASSOCIATIONS (ASSA)

**January 3 - 5, 2014  
Philadelphia, Pennsylvania**

### *AERE Sessions*

*Editor's Note: Presenters are indicated in bold face type.*

#### **Session 1 Uncertainty, Risk, and Discounting in Climate Policy**

Chair: Thomas Sterner, University of Gothenburg

**Christian Traeger**, University of California (UC) Berkeley (with Sverre Jensen, UC Berkeley)  
*SCCCC: The Social Cost of Carbon Caused Catastrophes – Low Probability, High Impact Events in Integrated Assessment*

Discussant: Geoffrey Heal, Columbia University

**Gernot Wagner**, Environmental Defense Fund and Columbia University (with Richard J. Zeckhauser, Harvard University)  
*The Need for Deep Thinking about Deep Uncertainty: Rational Responses to Ignorance*

Discussant : Howard Kunreuther, University of Pennsylvania

**Randall Walsh**, University of Pittsburgh (with Shawn McCoy, University of Pittsburgh)  
*W.U.I. On Fire: Risk Salience in the Colorado Front Range*

Discussant: Nicholes Flores, University of Colorado-Boulder

**Antony Milner**, London School of Economics (with Geoffrey Heal, Columbia University)  
*Discounting Under Disagreement*

Discussant : Thomas Sterner, University of Gothenburg

#### **Session 2 Habit Formation and Voluntary Approaches to Environmental Policy**

Chair: John List, University of Chicago

**Benjamin Gilbert**, University of Wyoming (with Josh Graff Zivin, UC San Diego)  
*Consumer Inattention in a Model with Habit Formation and Pollution: Theoretical and Empirical Implications for Residential Electricity Consumption*

Discussant: Hunt Allcott, New York University

**Neha Khanna**, Binghamton University (with Martina Vidovic, Rollins College, and Michael Delgado, Purdue University)  
*Third Party Certification and the Effectiveness of Voluntary Pollution Abatement Programs: Evidence from Responsible Care*

Discussant: George Delmas, University of Illinois

**Ann Wolverton**, US EPA (with Charles Griffiths and Will Wheeler, US EPA)  
*Evaluating the Effectiveness of Voluntary Programs: Did Ohio's ToxMinus Program Affect Participants' TRI Emissions?*

Discussant: Anna Alberini, University of Maryland, College Park

**Thomas P. Lyon**, University of Michigan (with Carolyn Fischer, Resources for the Future)  
*A Theory of Multi-Tiered Ecolab*

Discussant: Jill McCluskey, Washington State University

#### **Session 3 Political Economy in Climate Policy**

Chair: Andreas Lange, University of Hamburg

**Joel R. Landry**, Cornell University  
*The Other Side of Green Pork: How Heterogeneity in Environmental Preferences Affects the Distributional and Efficiency Implications of Climate Policy*

Discussant: Ian Parry, IMF

**Kyle Meng**, Columbia University

*The Cost of Potential Cap-and-Trade Policy: An Event Study Using Prediction Markets and Lobbying Records*

Discussant: Mark Jacobsen, UC San Diego

**Deepak Rajagopal**, UC Los Angeles

*Tradable Emission Performance Standards for Reducing GHG Emissions: Evidence from Alberta's Specified Gas Emitters Regulation*

Discussant: Derek Lemoine, University of Arizona

**Walid Marrouch**, Lebanese American University and CIRANO (with Hassan Bencheekrouna, McGill University and CIREQ, and Amrita Ray Chaudhuria, University of Winnipeg and CentER, TILEC, Tilburg University)

*Adaptation Technology and Free-Riding Incentives in International Environmental Agreements*

Discussant: Andreas Lange, University of Hamburg

#### Session 4

##### Air Polluting in Developing Countries

Chair: Matthew Neidell, Columbia University

**Marc Jeuland**, Duke University (with Jessica Lewis, Subhrendu K. Pattanayak, and Jie Sheng Tan Soo, Duke University)

*Household Preferences for Clean Energy Technologies in Rural India*

Discussant: Rema Hanna, Harvard University

**V. Brian Viard**, Cheung Kong Graduate School of Business (with Shihe Fu, Wang Yanan Institute for Studies in Economics)

*The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity*

Discussant: Reed Walker, UC Berkeley

**Arun S. Malik**, George Washington University (GWU) (with Paul E. Carrillo and Yiseon Yoo, GWU)

*Driving Restrictions That Work? Quito's Pico y Placa Program*

Discussant: Prashant Bharradwaj, UC San Diego

**Alberto Salvo**, Northwestern University (with Franz M. Geiger, Northwestern University)

*Fuel Mix and Air Quality During the 2009-2011 Natural Experiment in the São Paulo Metropolitan Area*

Discussant: Erin Mansur, Dartmouth College

#### Session 5

##### Advances in Natural Resource Economics

Chair: Benjamin Gilbert, University of Wyoming

**Christopher Costello**, UC Santa Barbara (with Nicolas Quérou, CNRS Lameta, and Agnes Tomini, UMR Lameta)

*Partial Enclosure of the Commons*

Discussant: Junjie Zhang, UC San Diego

**Adrian A. Lopes**, Cornell University (with Jon Conrad, Cornell University)

*Poaching and the Protection of an Endangered Species: A Game-theoretic Approach*

Discussant: Linda Fernandez, Virginia Commonwealth University

**John Lynham**, University of Hawaii (with Andreas Leibbrandt, Monash University)

*Coase it's Fehr: Property Rights and Social Preferences*

Discussant: Dean Lueck, University of Arizona

**Branko Boskovic**, University of Alberta (with Linda Nøstbakken, University of Alberta)

*The Costs of Protecting the Wild: Evidence from Natural Resource Auctions*

Discussant: Ujjayant Chakravorty, Tufts University

#### Session 6

##### Domestic Environmental Policy

Chair: Meredith Fowlie, UC Berkeley

**Daniel Brent**, University of Washington

*Estimating Water Demand at the Intensive and Extensive Margin: The Role of Landscape Dynamics*

Discussant: Nicolai Kuminof, Arizona State University

**Christian Almer**, University of Bath (with Stefan Boes, University of Lucerne, and Stephan Nuesch, University of Zurich)

*How Do Housing Prices Adjust after an Environmental Shock? Evidence from a State-Mandated Change in Aircraft Noise Exposure*

Discussant: Justin Gallagher, Case Western University

**Matthew Harding**, Stanford University (with Martin Burda, University of Toronto)  
*Environmental Justice: Evidence from Superfund Cleanup Durations*

Discussant: Jaren Pope, Brigham Young University

**J. Scott Holladay**, University of Tennessee (with Jacob LaRiviere, University of Tennessee)  
*The Effect of Abundant Natural Gas on Air Pollution from Electricity Production*

Discussant: Kevin Novan, UC Davis

### Session 7

#### **Automobiles, Fuel Markets and Energy Efficiency**

Chair: Antonio M. Bento, Cornell University

**Gloria Helfand**, US EPA (with Ari Kahan and Michael Shelby, US EPA; David Greene and Changzheng Liu, Oak Ridge National Laboratory)  
*Testing a Model of Consumer Vehicle Purchases*

Discussant: Shanjun Li, Cornell University

**Kevin Roth**, UC Irvine  
*The Unintended Consequences of Uncoordinated Regulation: Evidence from the Transportation Sector*

Discussant: Ashley Langer, Arizona

**Junjie Zhang**, UC San Diego (with Dae-Wook Kim, Soongsil University and Jong-Ho Kim, Pukyong National University)  
*The Impact of the Refiners' Discount Program on the South Korean Gasoline Market*

Discussant: Steve Cicala, University of Chicago

**Joseph Maher**, University of Maryland, College Park  
*Evaluating the Cost-Effectiveness of Rebate Programs for Residential Energy Efficiency Retrofits*

Discussant: Kenneth Gillingham, Yale University

### Session 8

#### **Agriculture, Land Use and Climate**

Chair: Max Auffhammer, UC Berkeley

**Emanuele Massetti**, Yale University (with Robert Mendelsohn, Yale University)  
*Do Temperature Thresholds Exist for Agriculture?*

Discussant: Michael Roberts, University of Hawaii at Manoa and North Carolina State University

**David J. Smith**, University of Minnesota (with John Horowitz, ERS - USDA)  
*Emissions vs. Practice Baselines for Agricultural Greenhouse Gas Offsets*

Discussant: Cathy Kling, Iowa State University

**Taro Mieno**, University of Illinois (with Nicholas Brozovic, University of Illinois)  
*Energy Load Control, Groundwater Conservation, and Climate Change*

Discussant: Ram Fishman, George Washington University

**Suhyun Jung**, University of Minnesota (with Stephen Polasky, University of Minnesota)  
*The Effectiveness of Monitoring and Enforcement of Environmental Regulations by Agricultural Multinationals and NGOs in the Brazilian Amazon*

Discussant: Eduardo Souza-Rodrigues, University of Toronto

### Session 9

#### **Roundtable**

#### **Options for a New International Climate Regime Arising from the Durban Platform for Enhanced Action**

Chair: Robert Stavins, Harvard University

Panelists:

Joseph Aldy, Harvard University  
Ottmar Edenhofer, Technical University of Berlin  
Geoffrey Heal, Columbia University  
Gilbert Metcalf, Tufts University  
William Pizer, Duke University

## **EAERE 21<sup>st</sup> ANNUAL CONFERENCE**

**June 24 – 27, 2015**

**Helsinki, Finland**

Organization: EAERE and University of Helsinki

For conference information: E-mail: [eaere@eaere.org](mailto:eaere@eaere.org)

**MIDWEST ECONOMIC ASSOCIATION  
(MEA) ANNUAL MEETING**

**March 21 – 23, 2014  
Hilton Orrington Hotel  
Evanston, Illinois**

***AERE Sessions***

*Editor's note: Names in bold font are the presenting authors.*

**Housing & Environmental Regulation**

Chair: William Rogers, University of Missouri-St. Louis

“The Effect of Winter Fuel Payment on the Renewable Energy Installments in the UK”

**Ian Lange**, Colorado School of Mines,  
[langeian3@gmail.com](mailto:langeian3@gmail.com)

Mirko Moro, University of Stirling  
Mohammad Rahman, University of Stirling  
Discussant: Namrata Kala, Yale University

“Time Preferences, Health Behaviors, and Energy Consumption”

**Garth Heutel**, University of North Carolina at Greensboro and NBER ([gaheutel@uncg.edu](mailto:gaheutel@uncg.edu))  
David Bradford, University of Georgia  
Charles Courtemanche, Georgia State University and NBER  
Patrick McAlvanah, Federal Trade Commission  
Christopher Ruhm, University of Virginia and NBER  
Discussant: Sarah West, Macalester College

“Do Wind Turbines Affect the Sale Price of Single-Family Homes? Evidence from McLean County, Illinois”

**Sarah West**, Macalester College  
[wests@macalester.edu](mailto:wests@macalester.edu)  
Natalie Camplair, Macalester College  
Discussant: Allen Bellas, Metropolitan State University

“Reducing the Cost of *Ex Post* Bailouts with *Ex Ante* Regulation: Evidence from Building Codes”

**Tatyana Deryugina**, University of Illinois at Urbana-Champaign, [deryugin@illinois.edu](mailto:deryugin@illinois.edu)  
Discussant: Keith Brouhle, Grinnell College

**International Agreements & Environmental Policy**

Chair: Ian Lange, Colorado School of Mines

“Coalition-Proof Hub-and-Spoke and Multilateral Green Technology International Agreements”

**Emilson Caputo Delfino Silva**, University of Alberta,  
[emilson@ualberta.ca](mailto:emilson@ualberta.ca)

Chikara Yamaguchi, University of Alberta and Hiroshima Shudo University

Discussant: Sahar Milani, University of Wisconsin-Milwaukee

“Economically Viable Option to Implement REDD+ in Andhra, Pradesh”

**Sakshi Gupta**, Teri University,  
[Sakshigupta488@gmail.com](mailto:Sakshigupta488@gmail.com)

Discussant: Ida Ferrara, York University

“Experimental Analysis of Market Based Agricultural Greenhouse Gas Instruments: Alternative Market Designs, Monitoring, and Enforcement”

**Brian Scott**, Washington College,  
[Bscott3@washcoll.edu](mailto:Bscott3@washcoll.edu)

Discussant: Barrett Kirwan, University of Illinois at Urbana-Champaign

“Is National Treatment Good for the Environment?”

**Paul Missios**, Ryerson University  
([pmissios@ryerson.ca](mailto:pmissios@ryerson.ca))

Ida Ferrara, York University

Halis Murat Yildiz, Ryerson University

Discussant: Emilson Caputo Delfino Silva, University of Alberta

**Agriculture & Farming**

Chair: Brian Scott, Washington College

“The Costs of Continuous Conservation Tillage”

**Lyubov Kurkalova**, North Carolina A&T State University, [lkurkal@ncat.edu](mailto:lkurkal@ncat.edu)

Obed Quaicoe, North Carolina A&T State University  
Silvia Secchi, Southern Illinois University

Discussant: Jessica Harriger, Western Illinois University

“The Role of Climate vs. Weather on Agricultural Profits: Implications for Climate Change”

**Namrata Kala**, Yale University.  
[Namrata.kala@yale.edu](mailto:Namrata.kala@yale.edu)

Discussant: Paul Missios, Ryerson University



“Self and Social Interests as Motivating Factors in Farmer’s Willingness to Adopt Conservation Practices”

**Matthew Winden**, University of Wisconsin-Whitewater, [windenm@uww.edu](mailto:windenm@uww.edu)

Adrienne Ohler, Illinois State University

Discussant: Diane Dupont, Brock University

“Charity Hazard in Crop Insurance”

**Barrett Kirwan**, University of Illinois at Urbana-Champaign, [bkirwan@illinois.edu](mailto:bkirwan@illinois.edu)

Tatyana Deryugina, University of Illinois at Urbana-Champaign

Discussant: Alejandro Prera, University of New Mexico

### **Patents, R&D, Investment, and Environmental Innovation**

Chair: Lea-Rachel Kosnik, University of Missouri-St. Louis

“How Environmental Policy Stringency Affects Industrial R&D: A Cross-Country Investigation with Industry Characteristics”

**Sahar Milani**, University of Wisconsin-Milwaukee, [smilani@uwm.edu](mailto:smilani@uwm.edu)

Discussant: Ian Lange, Colorado School of Mines

“Knowledge Flows Within a Voluntary Environmental Program”

**Keith Brouhle**, Grinnell College,

[brouhle@grinnell.edu](mailto:brouhle@grinnell.edu)

Brad Graham, Grinnell College

Donna Harrington Ramirez, University of Vermont

Discussant: Matthew Winden, University of Wisconsin-Whitewater

“Technical Change in Cooling Systems at U.S. Power Plants: Effects on Total Flows?”

**Allen Bellas**, Metropolitan State University,

[Allen.Bellas@metrostate.edu](mailto:Allen.Bellas@metrostate.edu)

Ian Lange, Colorado School of Mines

Discussant: Marc Gronwald, University of Aberdeen Business School

“Lobbying for Environmental Policy and Foreign Direct Investment: Rent Creation or Rent Destruction?”

**Ida Ferrara**, York University, [iferrara@yorku.ca](mailto:iferrara@yorku.ca)

Paul Missios, Ryerson University

Halis Murat Yildiz, Ryerson University

Discussant: Lea-Rachel Kosnik, University of Missouri-St. Louis

### **Environmental Surveys & Signaling**

Chair: Matthew Winden, University of Wisconsin-Whitewater

“The Value of Environmental Status Signaling”

**Jessica L. Harriger**, Western Illinois University, [Jl-harriger@wiu.edu](mailto:Jl-harriger@wiu.edu)

Michael S. Delgado, Purdue University

Neha Khanna, Binghamton University

Discussant: Tatyana Deryugina, University of Illinois at Urbana-Champaign

“What Have Economists Been Doing for the Last 50 Years?”

**Lea-Rachel Kosnik**, University of Missouri-St. Louis, [kosnikl@umsl.edu](mailto:kosnikl@umsl.edu)

Discussant: Garth Heutel, University of North Carolina at Greensboro *and* NBER

“Temporal Stability of Water Quality Values Across Stated Preference Question Formats”

**Diane Dupont**, Brock University,

[diane.dupont@brocku.ca](mailto:diane.dupont@brocku.ca)

J. Price, Brock University

Vic Adamowicz, University of Alberta

Discussant: Brian Scott, Washington College

“Second-Hand Smoke Exposure: Public Policy for Public and Private Spaces”

**Debra Israel**, Indiana State University,

[debra.israel@indstate.edu](mailto:debra.israel@indstate.edu)

Emily Richards, Indiana State University

Discussant: Israel-Akinbo Sylvia Olawumi, University of the Free State

### **Forests, Fish, Oil and Energy**

Chair: Debra Israel, Indiana State University

“Reauthorizing the Federal Lands Recreation Enhancement Act: Impact to Recreation Demand of National Forests in the Southwest”

**Alejandro Prera**, University of New Mexico, [alprera@unm.edu](mailto:alprera@unm.edu)

Jennifer Thacher, University of New Mexico

Kristine Grimsrud, Statistics Norway

Michael Hand, U.S. Department of Agriculture

Dan McCollum, U.S. Department of Agriculture

Robert Berrens, University of New Mexico

Discussant: Richard T. Melstrom, Salisbury University

“Indoor Air Pollution, Household Energy Use and Behaviour in Rural Areas of Developing Countries”

**Israel-Akinbo Sylvia Olawumi**, University of the Free State, [akinboso@yahoo.co.uk](mailto:akinboso@yahoo.co.uk)  
Discussant: Sakshi Gupta, Teri University, India

"The Bioeconomics of Managing Bycatch in a Commercial-Recreational Fishery"

**Richard T. Melstrom**, Salisbury University,  
[rtmelstrom@salisbury.edu](mailto:rtmelstrom@salisbury.edu)

Discussant: Lyubov Kurkalova, North Carolina A&T State University

"How Efficient is the Global Oil Market – A Multifractal Perspective"

**Marc Gronwald**, University of Aberdeen Business School, [mgronwald@abdn.ac.uk](mailto:mgronwald@abdn.ac.uk)

Cristina Sattarhoff, Hamburg University

Discussant: Debra Israel, Indiana State University

## 6<sup>TH</sup> ANNUAL CONFERENCE OF THE SOCIETY FOR BENEFIT-COST ANALYSIS

**March 13 - 14, 2014**  
**The George Washington University**  
**Marvin Center**  
**Washington, DC**

Website:

<http://benefitcostanalysis.org/events/2014-conference>

## SOUTHERN ECONOMIC ASSOCIATION (SEA)

**83<sup>RD</sup> Annual Meeting**  
**November 23-25, 2013**  
**Tampa Marriott Waterside Hotel and Marina**  
**Tampa, Florida**

*AERE Sessions*

*Editor's note: Names in bold font are the presenting authors.*

**Saturday, November 23**

**Behavioral and Experimental**

8:00 - 9:45 a.m.

AERE Session 26A

**Session Chair:** Jill L. Caviglia-Harris, Salisbury University

### **Papers:**

"Estuarine Gifts: Assessing Hypothetical Bias in Households' Willingness-to-Pay for Coastal Habitat"

**Paul R. Hindsley**, Eckerd College

Ash Morgan, Appalachian State University

Craig E. Landry, East Carolina University

John C. Whitehead, Appalachian State University

"Enforcing Environmental Agreements Under Uncertainty"

**David M. McEvoy**, Appalachian State University

Todd L. Cherry, Appalachian State University

"Experimental Analysis of Willingness-to-Pay for Salt-Acclimated Prawns"

**Matthew A. Freeman**, Mississippi State University

Kalyn T. Coatney, Mississippi State University

Wes Schilling, Mississippi State University

"Predictive Validity of Revealed/Stated Behavior Data: Evidence from a Natural Experiment"

**John C. Whitehead**, Appalachian State University

Ash Morgan, Appalachian State University

William L. Huth, University of West Florida

### **Cars and Boats**

10:00 - 11:45 a.m.

AERE Session 26B

**Session Chair:** Daniel Petrolia, Mississippi State University

### **Papers:**

"The Distribution of Hybrid Electric Vehicle Subsidies in the Canadian Automobile Market"

**Sumeet Gulati**, University of British Columbia

Carol McAusland, University of Maryland

James Sallee, University of Chicago

"The Value of Environmental Status Signaling: The Case of the Toyota Prius"

Michael S. Delgado, Purdue University

**Jessica Harriger**, Western Illinois University

Neha Khanna, Binghamton University

"Heterogeneous Myopia in Vehicle Purchases"

**Hocheol Jeon**, Iowa State University

"Measuring Divers' Willingness-to-Pay for Large Ship Artificial Reef Attributes"

**Ash Morgan**, Appalachian State University

Paul R. Hindsley, Eckerd College

William L. Huth, University of West Florida

## Pollution

1:00 - 2:45 p.m.

AERE Session 26C

### Session Chair:

Shana M. McDermott, University of New Mexico

### Papers:

"Coal Plants' Response to Renewable Portfolio Standards"

**Suman Gautam**, The Pennsylvania State University  
R.J. Briggs, The Pennsylvania State University

"The Relationship Between the Carbon Market and Financial Markets—A Frequency Domain Analysis"

**Marc Gronwald**, Ifo Institute for Economic Research  
Stefan Trueck, Macquarie University

"The Effect of Abundant Natural Gas on Air Pollution from Electricity Production"

**J. Scott Holladay**, The University of Tennessee  
Jacob LaRiviere, The University of Tennessee

"Third Party Verification and the Effectiveness of Voluntary Pollution Abatement Programs: Evidence from the American Chemistry Council's Responsible Care Program"

**Martina Vidovic**, Rollins College  
Neha Khanna, Binghamton University  
Michael S. Delgado, Purdue University

## Forests and Parks

3:00 - 4:45 p.m.

AERE Session 26D

### Session Chair:

Martina Vidovic, Rollins College

### Papers:

"Working with Ecology: Using the Allee Effect for Invasive Species (Control) Policy"

**Shana M. McDermott**, University of New Mexico  
David Finnoff, University of Wyoming

"Valuing Global Public Goods: A Delphi Contingent Valuation (CV) Survey of the Amazon Rainforest"

**Ståle Navrud**, Norwegian University of Life Sciences  
Jon Strand, Development Research Group, The World Bank

"'Friending' the National Parks: Determinants of Overcoming Collective Action Problems in Supporting National Parks"

**Douglas S. Noonan**, Indiana University-Purdue University, Indianapolis

Tracy Yandle, Emory University

"Forest Harvest Practices and Housing Values"

**Toni Sipic**, Central Washington University  
Matthew Novak, Central Washington University

## Sunday, November 24, 2013

### Preferences

8:00 - 9:45 a.m.

AERE Session 26F

### Session Chair:

J. Scott Holladay, The University of Tennessee

### Papers:

"Value of Life, Economics of"

**Glenn C. Blomquist**, University of Kentucky

"Risk Preferences and Perceptions: The Case of Branded Gulf Oysters"

**Daniel Petrolia**, Mississippi State University  
Bill Walton, Auburn University

"Time Use Responses to Natural Disasters"

**Brian Vander Naald**, University of Alaska Southeast  
Toni Sipic, Central Washington University

"Economic Values of Coastal Erosion Management"

**Craig E. Landry**, East Carolina University  
John C. Whitehead, Appalachian State University

### Resource Use and Development

10:00 - 11:45 a.m.

AERE Session 26G

### Session Chair:

James F. Casey, Washington and Lee University

### Papers:

"Escaping the Boom-Bust Pattern of Frontier Development: The Dynamics of Urban and Rural Migration under Resource Constraints"

**Max Melstrom**, Salisbury University  
Luke Jones, Valdosta State University  
Jill L. Caviglia-Harris, Salisbury University

"Capital-Resource Economies and Resource Exhaustion"

**Johnson Kakeu**, Georgia Tech

"Adaptation, Mitigation and International Trade"

Alain-Desire Nimubona, University of Waterloo  
**Horatiu A. Rus**, University of Waterloo

"Boom Before Bust? The Industrial Organization of Groundwater"

**Ujjayant Chakravorty**, Tufts University  
E. Somanathan, Indian Statistical Institute

### **Water**

2:00 - 3:45 p.m.  
AERE Session 26H

**Session Chair:**  
Johnson Kakeu, Georgia Tech

**Papers:**  
"Consumer Surplus from SCUBA and Snorkeling in Belize"  
**James F. Casey**, Washington and Lee University

"Assessing the Property Value Benefits of Water Quality Changes: Are All Measures the Same?"  
**Patrick J. Walsh**, U.S. Environmental Protection Agency  
J. Walter Milon, University of Central Florida

"Primed for Conservation: Experimental Evidence from Nudges to Join a Water-Use Information Website"  
**Laura E. Grant**, University of Wisconsin Milwaukee  
Michael Price, Georgia State University

"Private Provision of Public Goods: Evidence from the Effect of Environmental Groups on Water Quality"  
**Laura E. Grant**, University of Wisconsin Milwaukee  
Christian Langpap, Oregon State University

### **Where Do Environmental Economists Stand?**

4:00 - 5:45 p.m.  
AERE Session 26I

**Moderator:**  
Glenn C. Blomquist, University of Kentucky

**Panelists:**  
**Lea-Rachel Kosnik**, University of Missouri-St. Louis  
"Environmental Economics in the Literature, 1960-2010"

**Lynne Lewis**, Bates College  
"Textbooks and Teaching Environmental Economics When the Audience Is Mixed: Where to Draw the Line"

**Jill L. Caviglia-Harris**, Salisbury University  
"Flipping the Undergraduate Classroom: Using Online Videos to Improve Understanding of the Principles of Environmental Economics"

**John C. Whitehead**, Appalachian State University  
"Is There Consensus Among Environmental and Resource Economists?"

### **WESTERN ECONOMIC ASSOCIATION INTERNATIONAL (WEAI) ANNUAL CONFERENCE**

**June 27 - July 1, 2014  
Denver, CO**

The WEAI is holding its annual conference in Denver, Colorado on June 27 – July 1, 2014. Since the 2014 meeting overlaps with the World Congress of Environmental and Resource Economists (WCERE) taking place on June 28 – July 2, 2014 in Istanbul, Turkey, AERE will not be sponsoring sessions at the WEAI this year.

However, AERE members who are unable to attend the WCERE are encouraged to submit papers directly to the WEAI. Please see the WEAI website for details: <http://www.weai.org/index.html>.

The deadline to submit a paper is December 15, 2013 and the deadline to organize a session is February 1, 2014.

## Should We Be Using Repeated-Choice Surveys to Value Public Goods?

Daniel R. Petrolia and Matthew G. Interis

Mississippi State University, Department of Agricultural Economics

### 1. Introduction

Multinomial-choice (MC) surveys, in which respondents choose among more than two alternatives, are being used increasingly to value environmental public goods, especially given the rapidly growing interest in ecosystem service valuation. The MC question has several attractive qualities relative to the single binary-choice (SBC) format originally proposed by Bishop and Heberlein (1979) and recommended by Arrow et al. (1993): increased information collected per respondent, which means, all else equal, smaller sample requirements and/or increased statistical efficiency, and the ability to extract both within- and between-subject information on particular program attributes, thus expanding the scope of preference information collected. Two remaining advantages of the SBC format are that it is a choice situation with which respondents are familiar (e.g., voting on a public referendum) and it can be made incentive compatible. The MC format is well known to generally not be incentive compatible and empirical evidence on whether it is demand revealing is mixed (see Adamowicz et al. 1998; Bateman, Munro, and Poe 2008; Collins and Vossler 2009; and Hanley, Wright, and Adamowicz 1998). But, like the SBC format, the MC format is familiar to respondents in that it is similar to voting over more than two candidates for office.

However, surveys utilizing the MC question format typically implement a repeated-choice format (here, referred to as repeated multinomial-choice, RMC), wherein respondents evaluate not one, but a series of choice sets in a single survey. Yet there is very little evidence in the literature that the appropriateness and credibility of RMC surveys in a public goods valuation context has been seriously and thoroughly considered. And although several papers (Bateman et al. 2001; Carson and Groves 2007, 2011; Day and Prades 2010; DeShazo 2002; Krosnick 1999) allude to the fact that repeated choice surveys may not be appropriate, none asks the question explicitly: *Should we be using repeated-choice surveys to value public goods?* The purpose of this paper is to discuss a number of issues on the way to providing an answer to this question.

Carson and Groves (2007, 2011) and Mitchell (2002) emphasize the need for posing only realistic and credible questions for respondents to take the survey seriously. We question whether RMC surveys satisfy these requirements in three key ways: 1) Is casting multiple votes on a single issue credible? 2) Is there a credible RMC decision rule? And 3) Is the assumption of independence across choice sets credible? We address each of these questions then offer some guidance regarding a reasonable way forward.

### 2. Is casting multiple votes on a single issue credible?

One of the advantages of the SBC format cited by Arrow et al. (1993) is that it is “realistic [as] referenda on the provision of public goods are not uncommon in real life” (p. 21). This statement implies that a desirable property of hypothetical choice situations presented in valuation surveys is that they be similar to choice situations respondents might face in real life. However, the RMC format, by having respondents vote *multiple* times over multiple variants of a policy, only one of which will be provided, represents a significant departure from a real vote setting.

The argument is sometimes made that the repeated-response format “replicate[s] choices people make for market goods daily” (p. 198, Taylor, Morrison, and Boyle 2010). This is true; consumers are accustomed to repeatedly purchasing the same good, and in so doing, are accustomed to finding the particular set of choices to vary from time to time and from place to place. This is also true in the case of site-choice surveys for things such as trips to a recreational site, where the conditions at a given site can change from time to time, and consumers take multiple trips. But it is not obvious that the repeated-choice format is credible in a public goods context because public goods are not typically repeat-purchase goods.

### 3. Is there a credible decision rule for RMC?

Given that this repeated-choice setting may be an unfamiliar and unexpected format in which to cast votes,

the respondent may have any number of beliefs about how he should vote across the multiple choice sets depending upon the decision rule. The decision rule determines how survey responses will be used to determine which alternative is implemented. Although there is evidence that the particular decision rule chosen can affect behavior (Collins and Vossler 2009; Taylor, Morrison, and Boyle 2010), survey practitioners seemingly have paid little attention to this matter, as many RMC surveys contain no explicit decision rule at all.<sup>1</sup> Many simply ask respondents to treat each choice set independently, but it is not clear why respondents should have an incentive to do so (as we discuss in the next section). Certainly, survey results are not the sole determinant of which course of action to take regarding a public good, but without specifying a decision rule, or at least some description of how policy makers will use the survey results, the precise incentives for the respondents are unknown both to him and to the researcher.

On the other hand, choosing a decision rule that is credible in a field survey can be challenging. In the lab, the typical approach is to randomly choose only one particular choice set as binding, and implement the plurality decision rule within that selected choice set to determine the winner. In a field survey, however, as Carson and Groves (2011) argue, the random-selection mechanism is impractical because it would be ridiculous to ask respondents to believe that only one set of votes will be randomly selected to be turned over to policy makers for consideration.

One can imagine other decision rules. For example, will the alternative receiving the most votes, *when added across all choice sets* be implemented? Will the one receiving the most votes *out of the winners of each choice set* be implemented? Or, will the alternative winning the most choice sets be implemented? But will any of these more specific decision rules be credible? In any of the above examples, the winner could potentially have lost to another alternative in a given choice set. Will a respondent really believe that such an alternative would nevertheless be implemented? This then leads to two conclusions: (1) it is unreasonable to ask the respondent to make his choices under a decision rule that is inconsistent with how he thinks policy makers will use the information, and (2) it is extremely difficult to even conceive of a decision rule for the RMC format that is credible in the field.

The difficulty of identifying a field-credible decision rule may be why some surveys do not specify a decision rule but adopt the second approach, which is not to specify a decision rule *per se*, but to indicate more generally how the information from the survey will be used to influence the actual decision. In this case, respondents may be told to “Assume that the more votes an option receives, the more likely it is to be implemented.” Although Carson and Groves (2007) have shown that, under the SBC format, an advisory survey has the same incentive properties as a binding referendum, it is not clear that this is true for an RMC survey because the issue of how a respondent’s multiple votes will be aggregated along with other respondents’ votes to send an aggregate, unified signal to policy makers is still not resolved.

#### **4. Is the assumption of independence across choice sets reasonable?**

One of the standard assumptions made regarding RMC surveys is that respondents treat choice sets independently (Day and Prades 2010; McNair, Bennett, and Hensher 2011). The problem is that this assumption can be assured only through the use of a decision rule that provides an incentive for respondents to do so. But as was discussed in the previous section, a decision rule that is credible in the field may not exist. Vossler, Doyon, and Rondeau (2012) state that one of the sufficient conditions for incentive compatibility of a repeated binary choice survey is that “policy makers use the information in a way that maintains choice set independence” (p. 35). However it is not clear why policy makers would actually do so or why a respondent would believe that they would. The reason is that there is no obvious, reasonable set of beliefs about how policy makers will use survey information that is consistent with independence across choice sets.

Short of being able to induce independence via a credible decision rule, a typical approach in many RMC surveys is to simply *ask* respondents to treat choice sets independently. But as Carson and Groves (2011) point out, “there may be no reason for a rational respondent to do so” (p. 313). In fact, given that only one variant of the public good will ultimately be provided, the respondent is likely to do just the opposite. He may consider all alternatives to be in *direct competition* with one another *precisely because* only one variant of the good will be provided. Consequently, he will have an incentive to transfer information across choice sets and cast his series of votes in a manner consistent with his universal preferences over all alternatives. In other words, a “rational economic agent...should consider how best to answer the questions so as to manipulate the outcome to

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<sup>1</sup> Two recent exceptions are Vossler and Evans (2009) and Vossler, Doyon, and Rondeau (2012).



their advantage” (Day et al. 2012, p. 76). This is not to say that his votes will necessarily be cast in some sophisticated manner; they may just as likely be done very crudely. For example, Day et al. (2012) note one possibility where, as a respondent progresses through the choice sets, he may form a sense of what constitutes a “good deal” and vote against alternatives offering relatively “worse deals” when in truth he prefers them.

The empirical literature is full of evidence that the assumption of independence across choice sets does not hold. As Dillman (2007) puts it, “we should not be surprised that respondents identify the questions as related to one another and adjust their answers to the second question based on answers to the first one” (p. 91). Holmes and Boyle (2005) find that responses to their last question in a series were more informative than previous ones, with strong evidence of context dependence stemming from both price and non-price attributes. They suggest that respondents may be “comparison shopping”, by seeking to minimize cost across the set of alternatives. McNair, Hensher, and Bennett (2012) use a model which probabilistically classifies respondents into three different groups defined by various response strategies, and find that respondents who answer in accordance with traditional assumptions (truthful, independent responses with stable preferences) constitute the smallest group.

Day et al. (2012) find strong evidence of a variety of order effects under an RMC format. In particular, they find evidence of position-dependent order effects, due primarily to the use of a stepwise disclosure format. McNair, Bennett, and Hensher (2011) find no significant difference between responses to a SBC question and the first question of a repeated binary choice sequence (where advanced disclosure is used), but find a difference between the SBC responses and subsequent responses in the repeated sequence. Bateman et al. (2004) find evidence of order effects on sensitivity to scope, but they also attribute such effects to the use of a stepwise disclosure format. Day and Prades (2010) find that the probability of a particular alternative being chosen decreases significantly under worsening price sequences, but, consistent with the findings of DeShazo (2002), find no analogous effect under improving price sequences. They do find, however, significant effects in both directions with regard to worsening and improving commodity sequences.

Finally, given the evidence of the double-bounded binary choice method contradicting the assumption of independence across questions (Boyle, Bishop, and Welsh 1985; Mitchell and Carson 1993; Herriges and Shogren 1996; Flachaire and Hollard 2006; Carson et al.

1992; Alberini, Kanninen, and Carson 1997; Watson and Ryan 2007; Altaf and DeShazo 1994; McLeod and Bergland 1999; Haab and McConnell 2002; Cooper, Hanemann, and Signorello 2002; Carson and Groves 2007; Bateman et al. 2001), we find it peculiar that researchers would nevertheless be willing to make the same assumption under the closely-related RMC format.

## 5. What is the way forward?

Although the SBC format collects less information *ceteris paribus*, it has many desirable characteristics: it can be made incentive compatible, it mimics a real referendum vote, it is obvious what information is most likely to be presented to policy makers *and* how it will be used by them, and the task is simple: a yes/no vote on a single issue. The primary advantages of a repeated-choice format are that it gathers more information from each respondent than the SBC format, and that it allows for identification of individual attribute effects. There are two reasons why one would want to gather more information from each respondent. First, more information is better, *ceteris paribus*. But, as we have argued here, it is far from obvious that this additional information gathered from respondents is reliable. The second reason is that, to obtain a given number of observations, it is cheaper to gather multiple observations from each respondent. Research budget constraints are an important factor in any study, yet this cannot justify introducing a repeated-choice format in and of itself. It then becomes a question of whether the potentially poorer quality of information gathered from additional choice tasks beyond the first is worth the cost savings.

Second, the criticism of the SBC format that it cannot be used to estimate values of individual attributes is, fundamentally, a budget issue as well. Provided one can afford a sufficiently large sample, one can introduce treatments that vary non-price attribute levels in much the same way that price is varied across respondents in standard SBC surveys. This approach would provide for identification of attribute effects without incurring the problems associated with repeated-choice.

Holmes and Boyle (2005) and Day et al. (2012) admit that the repeated-response format may allow for learning, because initial responses may reflect an initial lack of understanding of what the respondent is being asked to do that is reconciled as the series of choice tasks progresses. Ladenburg and Olsen (2008) cite their results as evidence of this effect. Scheufele and Bennett (2012) point out, however, that it is also possible that respondents to a repeated-choice survey discover the possibility of responding strategically as they progress

through the choice tasks, and this “strategic learning” may coincide with learning about the choice task. They conclude that the tradeoff is unclear and worthy of future research.<sup>2</sup>

Curiously, a format that has not seen widespread use is the single-response MC format. It lacks incentive compatibility, but shares many of the same properties as the SBC format in that the choice task is simple and familiar to respondents, and the readily applied plurality decision rule is also credible. It mimics a real vote setting that respondents are accustomed to seeing: multi-candidate elections. It gathers more information from respondents than a SBC question (albeit not as much as a RMC format), allows for within-survey comparison and estimation of individual attribute effects, and does not suffer from any of the biases of repeated choice formats. Day et al. (2012) conclude that the initial choice task has excellent properties with respect to the standard criteria of price and scope sensitivity and that status-quo effects are significantly lower than in later tasks. They conclude that their findings are “encouraging inasmuch as it suggests that in the initial task respondents are more greatly inclined to judge options solely on the merits of their attributes.” (p. 90)

List, Sinha, and Taylor (2006) put it more simply in their justification for using a single MC question: “to make the solicitation as natural as possible” (p. 8). Thus, the single MC format appears to be a good candidate with a foot in both camps, but is not widely used, perhaps due to the temptation to adopt a RMC format and gain *even more* information. Nevertheless, we feel it is certainly worthy of further consideration.

## 6. Summary and Conclusion

Given the above discussion, we identify three key issues that warrant further research regarding the appropriateness of using RMC surveys to value public goods. First, the SBC format was adopted because respondents are being asked to evaluate potentially real policies, and the SBC format mimics a real vote setting. The RMC format, by having respondents vote multiple times over multiple variants of a policy, only one of which will be provided, represents a significant

departure from a real vote setting. The question of whether it is appropriate to ask respondents to behave as voters in a setting that is clearly foreign to the kind of voting they are accustomed to must be faced head on.

Second, in regards to the use of a decision rule, the researcher is caught in a “damned if you do, damned if you don’t” situation. A decision rule is necessary, first, to unify the multiple votes, second, to establish independence across choice sets, and third, to establish a baseline of beliefs about how the votes will be used by policy makers.<sup>3</sup> But a decision rule, even something less formal like a simple request to treat choice sets independently, does not appear to be credible in the field. If the researcher does not specify a decision rule, he risks leaving the repeated choice scenario open to all manner of respondent interpretations that may violate the assumed incentive structure faced by the respondent and consequently jeopardize the reliability of the data for the designed purpose.

Third, the evidence is stacked against the assumption of independence across choice sets. A credible decision rule may not exist to ensure independence in the field, there are a variety of logical reasons why a respondent would assume dependence, and the empirical evidence indicates that independence generally does not hold. At minimum, we believe it more reasonable to expect respondents to make some degree of inter-choice-set comparison that will inevitably influence their choices. To what degree determines whether choices under such conditions are rendered unreliable for the purpose for which the survey was undertaken. As Krupnick and Adamowicz (2007) point out, “People can doubt some aspect of the survey, but nevertheless vote as if the information were true – just to be cooperative. Or, respondents may vote differently than they would if they believed the survey. Or, if they outright reject information, they may vote zero, as in protest” (p. 54). If either of the latter cases is dominant, more work is warranted to work out the proper behavioral and empirical models that allow for dependence across choice sets.

In closing, we wish to reiterate the warnings given in the literature regarding alternatives to the SBC format. DeShazo (2002) suggests two options for future researchers: employ only single-response formats, or restrict follow-up questions to those whose bids monotonically decrease in value. Day and Prades (2010)

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<sup>2</sup> There is also evidence that the multinomial-choice format may lessen or avoid some problems observed with the SBC method: hypothetical bias (Lusk and Schroeder 2004), “yea saying” (Adamowicz 1995), part-whole bias (Hanley et al. 1998), and embedding (Adamowicz 1995; Adamowicz et al. 1998).

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<sup>3</sup> Independence across choice sets could perhaps be established independent of the decision rule, but in a field setting, the decision rule seems to be the opportune time to do so.

conclude that “Our findings cast serious doubt on the current practice of asking each respondent to undertake several choice tasks in a [RMC] while treating each response as an independent observation on that individual’s preferences” (p. 271). Bateman et al. (2001) conclude simply “that responses to follow-up questions should not be used as the basis of valuation exercises” (p. 209). We would be remiss if we failed to acknowledge that the design and implementation of some RMC surveys involve extensive vetting in the form of focus groups, pilot surveys, and pre-testing, and that such surveys may very well have overcome many of the issues we discuss here. Nevertheless, based on the concerns of previous researchers and our own, we advise that, until a consensus is reached, researchers should not be overly confident in the use of RMC surveys when it comes to valuation of public goods in the field.

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# **Research Needs for Reducing Greenhouse Gas Emissions from Vehicles**

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In recent years, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) have jointly embarked on a series of ambitious fuel economy/greenhouse gas (GHG) regulations for light-duty vehicles for model years (MYs) 2012-25, and medium- and heavy-duty trucks for MYs 2014-18 (U.S. EPA and Department of Transportation 2010, 2011, 2012). The agencies draw heavily on economic research to examine the impacts of the standards on vehicle markets, consumers, and the environment for their regulatory assessments. Of course, analyzing existing research results can identify new or unresolved issues.

This article asks for the help of the research community to make progress on a number of questions that have arisen in these rulemakings. Some of the issues include: modeling vehicle demand; the energy paradox related to fuel economy; consumer willingness to pay for vehicle attributes such as power and range; the impacts of the new vehicles on miles traveled; the impacts of reduced fuel consumption on energy security; and vehicle affordability. With EPA and NHTSA committed to evaluate the later-year light-duty vehicle standards by April 2018, and expected new standards for future medium- and heavy-duty trucks, results of this research can feed directly into the policy process.

The minds of environmental economists quickly turn to market-based incentives such as gasoline taxes or feebates to address GHG emissions. It should be noted that EPA does not have authority under the Clean Air Act to enact such policies. While studies of incentive policies for GHG reductions can contribute to influencing legislators, they will have little effect on EPA's policies under current law.

## **Modeling Vehicle Demand**

Vehicle GHG standards are likely to lead to changes in vehicle purchases. The technologies added to vehicles are likely to make them more expensive, but they also reduce their operating costs by increasing fuel economy; which of these two effects dominates for buyers affects the total number of vehicles sold. Because costs of reducing GHG emissions vary across vehicle types, the mix of vehicles sold may change. In addition, the

standards are now based on a vehicle's footprint (the area between the tires), such that larger vehicles have less stringent targets than smaller vehicles; as a result, each manufacturer will have a unique GHG standard based on the vehicles it sells. The footprint-based standards aim to encourage reduced GHG emissions across the fleet and discourage changes in vehicle sizes as a compliance strategy. Changes in the numbers and mix of vehicles sold will affect total emissions reductions achieved by the standards (e.g., Whitefoot and Skerlos 2012).

In the light-duty market, a number of papers have modeled vehicle purchases. At this time, though, it is not known whether the various vehicle choice models would make similar predictions about the effects of the standards on vehicle sales. Helfand and Wolverton (2011) find little assessment of how these many models of vehicle sales compare to each other, or of their ability to predict vehicle sales or the impacts of policies. Greene (2010) finds tremendous variation in estimates from these studies of the role of fuel economy in vehicle purchases, a parameter of particular interest. If models produce different results, then it becomes important to evaluate the validity of models before using them for policy analysis. Thus, research is needed to assess the effectiveness of these models for regulatory analysis.

The small amount of research that has been conducted on the impacts of sales in the medium- and heavy-duty vehicle market focuses on the impact of conventional pollutant regulations (which do not necessarily reduce operating costs), not GHG regulations, on vehicle sales. This market covers a great diversity of vehicles, including semi-trucks, delivery trucks, school buses, and specialty vehicles. There is a great need for research on the factors that affect demand for these vehicles and the likely response of these markets to GHG standards.

## **Energy Paradox and Fuel Economy**

Engineering studies have found fuel-saving technologies with short payback periods (e.g., under 3 years), such as more efficient engines and transmissions, that were not in wide use in the vehicle market until the new standards have come into force. This finding applies



in both the light-duty consumer market and the commercial medium- and heavy-duty market. Why have these technologies not previously been in wider use? Do these technologies have “hidden” costs that would explain their not being adopted? Or, has the market for fuel economy not cleared? What are the barriers to adoption?

This “energy paradox” or “efficiency gap” – lack of adoption of many cost-effective energy-saving technologies – has been observed in a wide range of consumer products, ranging from light bulbs to building insulation. Tietenberg (2009), Helfand and Wolverton (2011), Allcott and Greenstone (2012), and Gillingham and Palmer (2013) discuss a number of hypotheses to explain the gap, including market and behavioral failures, underestimated costs, and harm to other attributes, such as power or handling. The paradox is even more puzzling for commercial vehicles, where competitive forces should provide incentives for adoption of cost-saving technologies (Roeth et al. 2013).

One possible question is the very existence of the paradox. If the new technologies deliver the fuel savings estimated of them without harm to other vehicle attributes, then the gap appears to exist. On the other hand, if vehicle quality suffers with the new technologies, then those hidden costs may account for the lack of adoption of the fuel-saving technologies. In principle, because new light-duty vehicles subject to the standards have now been for sale for a couple years, it could be possible to examine this issue through observing the effects of the standards on vehicle sales and consumer satisfaction. In practice, untangling the effects of the standards from other changes in the vehicles (e.g., infotainment systems) and in market conditions (the state of economic recovery) presents a challenging research opportunity. For heavy-duty vehicles, new vehicles subject to the standards are just beginning to appear.

### **Willingness to Pay for Vehicle Attributes**

A common argument (e.g., Klier and Linn 2012, Knittel 2012) is that fuel economy/GHG standards are achieved by reducing vehicle power, size, or other, more highly valued attributes. On the other hand, EPA and NHTSA (2010, 2011, 2012) aver that it is possible, for enough money, to add fuel-saving technology to vehicles without harming those attributes. If the additional costs of adding GHG-reducing technology are high enough, though, automakers may choose to find less expensive ways of achieving the standards, such as reductions in performance. Vehicle range between refueling is another choice variable, not only for electric vehicles, but also

for gasoline vehicles: automakers can reduce weight by reducing gas tank size, thus reducing increases in vehicle range from greater fuel economy.

While fuel savings associated with GHG-reducing technology are fairly easy to monetize using market prices, the benefits of power, range, and other vehicle attributes are hedonic: their value must be estimated via nonmarket valuation methods. It is possible that, as with fuel economy, consumer vehicle choice models suggest a wide range of estimates of willingness to pay for these values; such comparisons are uncommon. Having robust estimates for them may provide information on hidden costs, or improve estimates of consumer responses to changes in vehicle characteristics. Studies assessing the range of estimates for consumer willingness to pay for power, range, and other vehicle attributes would contribute to EPA’s ability to understand changes in vehicle attributes, and consumer responses to those changes, due to the standards.

### **VMT Rebound Effect**

When fuel economy improves, the cost per vehicle mile traveled (VMT) goes down; simple demand theory suggests that the amount of driving should therefore increase, in what is termed the “rebound effect” (e.g., Small and Van Dender 2007). The magnitude of this effect can have a significant impact on the fuel savings and emissions reductions that are likely to result from the standards. Many studies of this effect in the light-duty vehicle sector use changes in fuel prices or fuel costs per mile as the source of variation, based on the assumption that consumers will respond to a change in fuel price in the same way that they would to a change in fuel efficiency. Only a few studies have sought to test whether this assumption is true, without a consensus on the answer (e.g., Greene 2012, Linn 2013). Research that directly estimates the increase in VMT attributable to an increase in fuel efficiency would be especially useful, but any estimates of the rebound effect can contribute to agency reviews.

In the medium- and heavy-duty vehicle sectors, even less research exists on the rebound effect and its determinants (Winebrake et al., 2012). The factors that influence miles traveled in these sectors are different and more complex than those for light-duty vehicles due to the commercial nature of most of these vehicles and the diversity of the vehicles, from school buses and utility trucks to tractor-trailer combinations, as well as the possibility for modal shifts between trucking, rail, and marine shipping in response to changes in relative costs across the modes. Research on rebound in these sectors would help fill a significant gap.

## Energy Security

A motivation for fuel economy standards, dating back to oil supply shocks of the 1970s, is to reduce dependence on oil imports. Reducing this demand could potentially affect the U.S. economy in several ways: (a) reducing the world price of oil; (b) reducing macroeconomic disruption; and (c) improving national security (EPA and NHTSA 2010, 2011, 2012; Leiby 2012). In the three rulemakings, the agencies included only the macroeconomic disruption impacts. While estimates of any of these effects would assist the agencies, of particular interest to a number of commenters on the proposal for the MY 2017-25 light-duty vehicle GHG rule were the impacts of reduced oil consumption on national security and military expenditures. The agencies, while recognizing the potential for these benefits, stated that they did not have a robust way to calculate this impact. Is it possible to find a marginal impact on military expenditures due to changes in oil consumption, given the multiple reasons for military expenditures in different regions? Other work might examine the implications of a potentially lower price of oil – how much more might be used elsewhere, for what other purposes, and with what environmental implications.

## Measures of Affordability

Some commenters on the MY 2017-25 light-duty vehicle GHG standards argued that the increased up-front costs of new vehicles would limit the access of many potential buyers to this market, even if the vehicles had lower operating costs. According to them, the standards were making the vehicles unaffordable to many households. From an economic perspective, “affordability” is not well defined; individuals choose what to purchase, and it is normal for prices and income to affect those choices. The new standards nevertheless are likely to have distributional impacts that economists can help understand. In the context of vehicle GHG standards, some possible ways to examine affordability could include: impacts on consumer access to new vehicle loans; changes in prices of low-priced vehicles, the entry point for many first-time new vehicle buyers; impacts on low-income households; or impacts on the used vehicle market. Developing ways of measuring these impacts, as well as identifying additional sources of impacts, would provide insights about impacts on these or other communities.

In the medium- and heavy-duty vehicle sectors, affordability concerns manifest themselves as access to capital markets. It is possible that, despite reduced

operating costs, buyers may face limits on their abilities to borrow for the more expensive trucks.

## Conclusion

The issues discussed here are just some of the topics that have arisen in these rulemakings; they are intended to suggest the breadth and challenge of analyses that regulatory agencies face in their vehicle GHG rulemakings. We are grateful to the economics community for your contributions to regulatory analyses, and hope that the satisfaction of seeing research cited in the *Federal Register* is further encouragement to tackle related topics. If any researchers would like to discuss these or other mobile source topics with me, or if you have papers (published or as working papers) that are relevant, please contact me at [helfand.gloria@epa.gov](mailto:helfand.gloria@epa.gov).

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The Sanford School includes a full-time faculty of 60, and offers an undergraduate major, two masters programs, a PhD, and a joint PhD in environmental policy. The Duke University Energy Initiative is a university-wide interdisciplinary collaboration, directed by Professor Richard Newell, that addresses pressing energy challenges related to the economy, the environment, and security. The Initiative cuts across business, science and engineering, environment, law, and policy to educate tomorrow's energy leaders, create new options through research, and improve energy decisions by engaging decision makers in business and government.

All candidates should submit a letter of application, CV, and recent writing sample to Professor Philip J. Cook, Energy Policy Search Committee Chair, via the following website:  
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**University of California, Davis  
Assistant/Associate Professor (Tenure Track or  
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Department of Agricultural and Resource Economics**

**JEL Classification: Q01 - Agriculture**

We seek an economist to join our department as an assistant or associate professor. The successful candidate will be expected to pursue a research program in agricultural economics and publish in high-quality refereed journals. We encourage applications from candidates with expertise and interests in any area of research within the field of agricultural economics, broadly defined, including agricultural production; economics of agricultural input markets such as land, water, finance, and labor; commodity and food demand; organization of agricultural industries beyond the farm gate (industrial organization); marketing; international trade; and agricultural policy and regulation.

Teaching responsibilities include 2-3 quarter-length courses per year spread across our graduate and undergraduate programs. At the graduate level, the successful candidate may teach core and elective courses in the M.S. program and in the Ph.D. elective field in agricultural economics.

This is an academic-year (9-month) position, which will carry a term appointment in the Agricultural Experiment Station (AES) requiring the appointee to conduct research of relevance to the mission of the California Agricultural Experiment Station.

Assistant Professor candidates should expect to complete all degree requirements for their Ph.D. by time of appointment, and must demonstrate the potential to achieve excellence in research and teaching at both the graduate and undergraduate levels. More senior candidates should already hold a Ph.D. and have an established record of outstanding research and excellent teaching. Salary and rank will be commensurate with qualifications and experience. Experienced applicants may merit a tenured Associate Professor position depending on their qualifications.

*UC Davis is an affirmative action/equal employment opportunity employer and is dedicated to recruiting a diverse faculty community. We welcome all qualified applicants to apply, including women, minorities, veterans, and individuals with disabilities.*

#### **Criteria for Selection**

- a) Ph.D. in economics, agricultural economics, or a closely related discipline, including thorough training in economic theory and econometrics.
- b) Demonstrated expertise and research interest in agricultural economics.
- c) Demonstrated or potential ability to develop a distinguished research program that results in publications in high-quality refereed journals.
- d) Ability to direct graduate students in the Agricultural and Resource Economics M.S. and Ph.D. programs, and willingness to serve as a student adviser.
- e) Demonstrated or potential ability to teach effectively at the undergraduate and graduate levels.
- f) Demonstrated or potential ability to work with peers in the department, on campus, and in Cooperative Extension to meet the missions of the University and the Agricultural Experiment Station.

Apply on-line at <http://recruit.ucdavis.edu>

Include a cover letter, statement of qualifications outlining research and teaching interests, curriculum vitae, official undergraduate and graduate transcripts, one or more publications or working papers, and four letters of reference. To ensure full consideration, candidates should apply by Nov 25, 2013, though submissions will be considered until the advertised position is filled.

For more information about this position and our department, visit our website at <http://agecon.ucdavis.edu>

## **NON-ACADEMIC**

**Position Title: Research Economist**  
**Organization: Conservation International**  
**Location: Arlington, VA**

#### **Summary:**

Conservation International (CI) helps societies sustainably care for nature, our global biodiversity, for the benefit of humanity. The Research Economist will lead the economic component of complex, interdisciplinary projects in a direct effort to address environmental and conservation issues in support of this mission.

Reporting directly to the lead of the Economics group of the Betty and Gordon Moore Center for Science and Oceans (hereafter 'MCSO'), this position is responsible for performing advanced, innovative, quantitative, original, environmental science and environmental economics research on a variety of scales: site, regional and global. He/she will provide high level conceptualization of research and manage project teams to deliver high quality research results and impactful publications.

The Research Economist collaborates closely with the lead of the Economics team, CI's Chief Scientist, and MCSO staff (who have deep expertise in biodiversity, ecosystem services, environmental economics, climate change, spatial planning, monitoring systems and other fields in a variety of ecosystems and socioeconomic contexts) and works hand-in-glove with staff of CI's multiple divisions in fostering healthy, sustainable societies around the world.

## **RESPONSIBILITIES**

### **Conduct in-depth research as it relates to:**

Application of environmental economic methods for ecosystem services assessment, particularly as it relates to:

- 1) valuation of ecosystem services – using standard market and non-market techniques, and working towards integration of biophysical and economic assessments;
- 2) scaling up of economic valuation results from site-scale analysis to regional, national scales and global scales, as appropriate, using economic principles and statistical techniques such as spatial econometrics;
- 3) assessment of project investment decision/siting particularly with respect to its impact on the provision of ecosystem services, using techniques such as cost-

benefit analysis, as well as assessment of mitigation, offsets alternatives and compensation mechanisms, as applicable;

4) natural capital accounting, specifically as it relates to experimental ecosystem services accounts and the economic assessments compatible with such approaches;

5) natural resource management, such as those with a focus on climate mitigation and adaptation, with a focus on benefits, risks and cost-effectiveness of interventions.

6) Assessment of implications of analysis to policy and decision-making processes, as appropriate.

### **Conduct original research**

Lead economic component of collaborative and transdisciplinary research implemented by MCSO staff with respect to research design, analysis, interpretation of findings, and preparation and submission of reports and papers. Areas of research currently implemented include but are not limited to:

- environmental economic accounting and Experimental Ecosystems accounts (EEA), particularly as it relates to integration of biophysical and economic assessments, economic valuation methodologies compatible with accounting standards, and scaling up of valuation results from site to national levels of assessments;
- environmental and social impacts resulting from investment decisions/siting (e.g., major roads, business siting), particularly as it relates to identification and valuation of ecosystem services, impacts on values given alternative scenarios, equity issues, and cost-benefit analysis of alternative interventions.
- human dependency on ecosystem services and vulnerability to changes, particularly as it relates to assessment of the environmental, economic and social values of ecosystems, sustainability of resource use, coping and mitigation strategies, cost-effectiveness of interventions.

### **Communicate findings, achievements, and synthesis, build capacity**

- Publish results in reports and peer-reviewed journals and other recognized forms of intellectual productivity.
- Communicate results of research to key audiences and to the public via a variety of media (presentations, technical reports, scientific papers, and/or blogs as appropriate).

- Support and lead (as appropriate) capacity building on approaches to valuing the benefits of nature to human communities and economies, particularly with respect to the subset of values that are captured through economic valuation.

### **Guidance and support:**

Support the MCSO and other CI divisions on the economic dimensions of a range of issues and projects implemented CI programs, specifically as it relates to economics approaches/methods for valuation and related analysis, environmental economic accounting, land use planning, and related topics.

### **Resource mobilization:**

- Create or identify opportunities for collaboration with other economic researchers, as well as colleagues from the MCSO, and other CI divisions on economic analysis for proposed or ongoing projects;
- Engage with academic and research organizations to identify and pursue key partnerships, collaborators, and funding opportunities.

Other duties as assigned by supervisor.

Working Conditions

- This position is based in Arlington, VA, USA.
- International and domestic travel to 30%

### **QUALIFICATIONS**

#### **Required**

- Ph.D. in economics or a closely related field with 4 years experience in environmental or natural resource economics – such as standard economic methods used in economic decision-making including market/non-market valuation, welfare analysis, mechanism design, policy and institutional evaluation, public choice theory/methods;
- Advanced proficiency in data collection, compilation, analysis and innovation in the designing and developing of concepts, applications, and technologies, specifically through the use of spatial analytic and statistical tools;
- Demonstrated ability to conceive and plan original research in environmental or natural resource economics, to think critically and synthetically across key related fields such as policy, ecology, social science, and



development, and to consider the policy needs and implications of the results;

- A minimum of 2 years of experience in leading projects and management of multidisciplinary teams examining questions in environmental economics and planning relevant to conservation and development issues;
- Ability to work to multi-task and work on multiple projects;
- Excellent oral and written communication skills in English and ability to clearly communicate research to an audience of a diverse background;
- Experience in publishing research in technical report and peer reviewed journals;
- Ability to work effectively with individuals from a variety of disciplines, cultures, and backgrounds;
- Ability to fundraise, including high level contributions to grant proposals to scientific groups, foundations; Demonstrated ability to work in highly collaborative and cross-organizational environments, create and cultivate innovative partnerships with academic and research institutions;
- Sense of humor, ability to have fun, and interest in building a strong culture.

#### **Preferred**

Proficiency in Spanish, French, or Portuguese.



**Environmental/Natural Resource Economist  
Office of Response and Restoration  
Silver Spring, MD**

I.M. Systems Group Inc. ([www.imsig.com](http://www.imsig.com)), a contractor to the National Oceanic and Atmospheric Administration (NOAA), seeks an economist to conduct natural resource damage assessments for oil spills and hazardous waste sites. This individual will work with NOAA's Assessment and Restoration Division under the Damage Assessment, Remediation, and Restoration Program

(DARRP- [www.DARRP.noaa.gov/](http://www.DARRP.noaa.gov/)) in the areas of economics for damage assessments, methods development, and technical support for policy initiatives. This position is located in NOAA's Silver Spring, Maryland offices.

The Assessment and Restoration Division's mission is to protect and restore coastal and marine resources injured by the release of oil or hazardous substances or direct physical impacts such as vessel groundings. Responsibilities of the incumbent will include: conducting economic assessments to determine the appropriate type and scale of restoration to compensate the public for natural resource injuries; working as part of an interdisciplinary team of scientists and attorneys on natural resource damage assessment cases; providing technical support to the NOAA Office of General Counsel and the Department of Justice in natural resource damage litigation; managing research conducted by academic experts and consulting firms; and developing improved, cost-effective methods and procedures for conducting natural resource damage assessments.

#### **Core Responsibilities:**

- Employee shall provide technical support for the successful design and conduct of natural resource damage assessments.
- Employee shall conduct economic research and evaluate alternative damage assessment methods. Methods will focus on scaling the level of restoration necessary to compensate the public and the environment for natural resource injuries.
- Employee shall maximize contributions to the office by enhancing personal professional development via identifying and seeking appropriate training and participation in professional meetings.

#### **Qualifications:**

##### Required Qualifications:

- Master's or Doctorate degree in economics, preferably in one of more of the following sub-disciplines: environmental, natural resource, or agricultural economics; or environmental policy with an emphasis in quantitative economic analysis.
- U.S. Citizenship
- Strong verbal and writing skills.
- Strong computer and analytical skills
- Self-motivated, energetic, strategic thinker.

### Desired Qualifications:

- Experience in valuing natural resources and environmental goods and services.
- Knowledge of damage assessment procedures mandated by CERCLA and OPA.
- Experience working in litigation.
- Experience working on interdisciplinary teams.

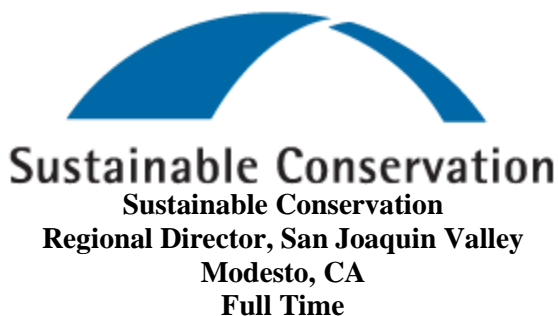
### **To Apply:**

Qualified candidates may apply by e-mailing a resume, the contact information for three (3) references and a cover letter explaining how their qualifications meet the needs of the job requirement (MS Word format strongly preferred) to the following email address: [jobs@img.com](mailto:jobs@img.com) with the subject heading **NOA13002 – Environmental Natural Resource Economist.**

Inclusion of copies of undergraduate and graduate college transcripts and a writing sample (preferably a technical paper or report) is encouraged. Please include your salary expectations in your cover letter.

The vacancy announcement is open until filled.

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### **About the Organization**

Sustainable Conservation advances the stewardship of natural resources using innovative, pragmatic strategies that actively engage businesses and private landowners in conservation. The organization's climate, air, water and biodiversity initiatives promote practical solutions that produce tangible, lasting environmental and economic benefits for California. Founded in 1993, Sustainable Conservation's effectiveness lies in building strong partnerships with business, agriculture, and government and establishing models for environmental and economic sustainability that can be replicated throughout California and, ultimately, the nation.

### **San Joaquin Valley**

Sustainable Conservation has been partnering with agriculture and other stakeholders in the San Joaquin Valley for over a decade to improve water and air quality and reduce greenhouse gas emissions. This past

year, it also launched a new initiative to promote more groundwater recharge in the Kings River basin. The San Joaquin Valley is California's top agricultural producing region growing a wide variety of fruits, nuts and vegetables and home to the majority of California's dairies, the largest agricultural industry in California. While vital to the nation's food production and the regional economy, agriculture production has taken a toll on environmental quality in the region, leaching nitrogen to groundwater and contributing to the region's poor air quality. In addition, dairies are a significant source of methane, a greenhouse gas 21% more powerful than carbon dioxide. Sustainable Conservation partners with dairies and other agricultural producers and stakeholders to identify and promote practices and technologies that improve environmental quality while also working economically for the farmer. Sustainable Conservation has promoted adoption of a suite of practices and technologies for managing manure to reduce leaching of nitrates to groundwater. It has also promoted methane digesters, which convert methane from manure into electricity, and conservation tillage, a practice that saves farmers money and reduces air pollution. The organization's newest initiative aims to help address another serious problem in the San Joaquin Valley, groundwater overdraft. Sustainable Conservation is partnering with a variety of stakeholders to explore whether groundwater recharge on active cropland with flood water during high water years can help address the overdraft issues in the region.

For more information, please visit <http://www.suscon.org/>.

### **Regional Director, San Joaquin Valley**

Sustainable Conservation seeks an exceptional Regional Director to expand our impact and presence in the San Joaquin Valley. The Regional Director will lead the effort to find and implement a regional solution(s) to addressing the environmental impact of dairies. The successful candidate will partner with staff on promoting on-farm practices to reduce dairies' groundwater contamination and contribution to air pollution. In addition, the Regional Director will partner with the Director of Restoration on Private Lands on expanding the groundwater recharge initiative in the San Joaquin Valley. The Regional Director reports directly to the Managing Director of Programs.

### **Primary Duties and Responsibilities**

The Regional Director, San Joaquin Valley will perform the following and other duties as assigned:

- Evaluate new ideas, technologies and business models that reduce the environmental impact of California dairies while providing profitable revenue streams and/or avoiding costs at a regional scale in areas of high concentrations of dairies. (Please see

<http://www.suscon.org/dairysummit/> for opportunities being evaluated).

- Build strategic partnerships with key stakeholders, including dairy industry, dairy industry trade associations, dairy consultants, federal, state and local regulatory and technical agencies, environmental and environmental justice organizations and other key influential stakeholders to build support for a regional strategy(ies) to address the environmental and health impacts of dairies.
- Identify and pursue role for Sustainable Conservation in implementing selected strategies.
- Oversee and partner with staff on program strategy to promote broad adoption of on-farm practices and technologies to reduce dairy industry pollution of groundwater supplies and air quality.
- Partner with Director for Restoration on Private Lands and staff on groundwater recharge initiative in the Kings River basin to support expansion program on existing crop land.
- Manage and support program staff in the Modesto office to achieve program and professional development goals; share coaching responsibilities with Senior Program Manager.
- Assist with communication outreach strategy to increase Sustainable Conservation's visibility in the San Joaquin Valley in order to benefit programs and fundraising efforts.
- Help develop and prepare grant proposals and reports in partnership with foundation and government grants staff members.

### **Qualifications**

The successful candidate will have the following minimum qualifications:

- 10+ years experience in a leadership role or equivalent; significant knowledge of the California agriculture sector and agricultural systems. Background in new business development and agricultural finance a plus.
- MBA or advanced degree in a relevant field
- Intellectual agility and ability to analyze, think critically and strategically, both for short-term project goals and for long-range strategic planning
- Exceptional written and oral communication skills with the ability to share and impart knowledge to others; ability to actively listen, synthesize information, and ask good questions
- Team management experience and a demonstrated ability to lead, motivate, and inspire others
- Experience working collaboratively and building effective partnerships with a variety of stakeholders, both externally and internally.
- Demonstrated success in program development, evaluation, and management
- Demonstrated ability to solve problems and propose innovative solutions

- Good organizational skills and time management practices, with a demonstrated ability to meet deadlines for both internal and external deliverables
- Demonstrated project management skills, including ability to develop workplans to execute program goals, oversee budgets, contractors and invoicing

### **Personal Attributes**

The following personal attributes are desired:

- Experience working with ambiguity, exercising patience, and remaining flexible and open to new approaches, ideas, and opportunities
- Approachable demeanor and openness to input from all levels of staff
- Excellent interpersonal skills, including an ability to listen to others and learn from their best ideas, share best practices and experiences, and contribute to a learning environment
- Impeccable integrity and trustworthiness, sense of humor, and diplomatic approach to problem-solving
- Ability to consistently interact with others in a professional, courteous, and tactful manner, maintain a positive attitude and good working relationships, and work effectively in a team setting
- Ability to work well with colleagues, consultants, funders, and other stakeholders across many diverse cultures and backgrounds

### **Compensation and Location**

Sustainable Conservation offers an excellent benefits package and a competitive salary that is commensurate with experience. This position will be located in Modesto, California.

### **To Apply**

To be considered for this position, interested candidates must follow the link below to submit a resume, cover letter, and salary requirements. CEA Recruiting is assisting Sustainable Conservation with this search. Please direct all applications and inquiries to CEA Recruiting. This position will remain open until filled.

[http://www.ceaconsulting.com/what/position\\_details.aspx?client=CEA&jobId=231](http://www.ceaconsulting.com/what/position_details.aspx?client=CEA&jobId=231)

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