

## National Renewable Energy Laboratory (NREL) Tour



### Keynote Address

Dr. Eric Barron,  
Director National Center for  
Atmospheric Research (NCAR)

### Featured Dinner Speaker

Mike Nelson, KMGH-TV  
Chief Meteorologist

“Wild Weather in the West”

**Clean Energy: Pathways to a**



# 2009

August 28–30, 2009  
Colorado School of Mines,  
Golden



**Low-Carbon**



Smart Energy Living  
Alliance™  
*Building a better energy future*

Conference Registration at:

[www.cres-energy.org/conference](http://www.cres-energy.org/conference)

Smart Energy Living® Consumer Workshops  
Registration:

<http://smartenergyliving.org/cm/Workshops/ConsumerWorkshops2009.html>

Discussions/Presentations on  
**Better Communities,  
Better Homes, Cleaner Energy**  
*With Sessions On*  
**Policy, Transportation, PV, Wind,  
Bio-fuels, Population, Urban Gardens,  
Homes, RE/EE Analysis & Tools**

**Free Exhibit Hall • Tours • Networking •  
Workshops and More!**

Additional Information is available  
at our website:

[www.cres-energy.org](http://www.cres-energy.org)

## Preliminary Schedule (Preliminary)

### Friday, August 28<sup>th</sup> ▪ Pre-Conference Events

**NREL Tour** (Additional \$25 fee): Early deadline and restrictions apply (See Registration Form for details)

Guided and narrated tour of the Golden NREL research labs. Meet at NREL Visitor Center. Two separate tour times. Limited to 28 pre-registered participants per tour.

**10:00-11:30 Tour A**

**1:30-3:00 Tour B**

**4:00-6:00 Registration** ▪ School of Mines Green Center

**6:30-8:00 Reception** ▪ School of Mines Geology Museum (13<sup>th</sup> & Maple St.)

### Saturday, August 29<sup>th</sup> (CSM Green Center) Colorado Renewable Energy Conference

**7:30-5:00 Registration** ▪ School of Mines Green Center (16<sup>th</sup> & Arapahoe)

**8:30-5:00 Exhibits Open to the Public (Green Center)** (Free)

**8:30-9:00 Welcome to CREC 2009 and Golden**  
Official welcome ▪ Hon. Jacob Smith ▪  
Craig Taylor CSM, Steve Sargent CRES Pres.

**9:00-10:00 Keynote Address - (Open to Public)**  
Dr. Eric Barron, Director of NCAR  
“Climate – State of the Science”

**10:00-10:15 Break**

**10:15-11:15 Plenary Session 1 –**  
“Communities Addressing Climate Change”

**Panel Discussion: Linking Technology and People for Carbon Mitigation in Colorado Cities – Strategies and Outcomes**

*Dr. Anu Ramaswami, Univ. of Colorado Denver*  
*Derek Okubo, National Civic League*  
*Brook Svoboda, Central City*  
*Gregg Thomas, City & County of Denver*  
*Kevin Standbridge City & County of Broomfield*

**11:15-11:30 Break**

**11:30-12:30 Plenary Session 2 –**  
“Utilities and Climate Change”

**Panel Discussion: Smart Grid: - Policy, Technology, Distributed vs. National Grid, People and Strategy**

*Dr. Steven Hauser, NREL*  
*Commissioner Matt Baker, Colorado PUC*  
*Ken Regelson, Five Star Consultants*

**12:30-1:30 Lunch**

**1:30-2:45 Community Case Studies**

*John Phelan, Fort Collins Energy Policy:  
Pushing the Limits of Efficiency*  
*Dr. Barbara Farhar, Boulder’s SmartGridCity Perceptions*  
*Kimberly Peterson, Aspen’s Clean Energy Pathway*

**Low-Carbon Power: Technology Frontiers**

*Joe McCabe, Light-weight thin-film Photovoltaic Unique Applications*  
*Dr. Jason Ren, Microbial Fuel Cells*  
*Dr. Martin Smith, Xcel Energy, Solar and SolarTAC*

**Carbon Management: Pros and Cons**

*Dr. Dag Nummendal, Carbon sequestration and beneficial use – solution to CO<sub>2</sub>?*  
*Andrew Horn, Carbon Sequestration Impacts*

**2:45-3:00 Break**

**3:00-4:00 Community: Policy/Transport**

*Richard Heinemeyer, Protecting Solar Rights*  
*Robert Wilson, Transit and Renewable Energy*  
*Kathryn Miles, Smart Grid, Vehicle Plug-in and Future Infrastructure*

**Low-Carbon Power: Analytical Tools**

*Adam Stenftenagel, Next Generation Home Energy Analysis*  
*Seung-Jae Lee, Estimating solar PV output*

**Carbon Sequestration: Better Solutions?**

*Ron Larson, Carbon Negativity: biochar*  
*Steve Stevens, Your Home as a Carbon Sink!*

4:00-5:00

**Community: Wind & Solar Development**

*Patrick Pelstring, Community Wind Dev.*  
*Skip McClimans, Community Wind and Solar*

**Low-Carbon Power: Policy & Investment**

*Matt Futch, The Climate Action Plan for Public Utilities and Rural Electric Cooperatives*  
*Tom Konrad, Investing in Clean Energy (Funds, ETFs, Stocks)*

**The Big Picture and Close to Home!**

*John Seager, Population Growth: 6.7 Billion+ Carbon Emitters*  
*Dana Miller, The Transition Movement, Grow Local Colorado Campaign & Urban Gardens*

**5:00-6:00 Cocktail Hour**  
(Host bar for wine and beer)

**6:00 Awards Ceremony Dinner**  
CSM Green Center - Friedhoff Hall  
**Mike Nelson, KMGH-TV, Denver**  
“Wild Weather in the West”

**8:45-4:00 CRES Committee on Education –**  
Clean Energy Education P-20 Teachers

### Sunday, August 30<sup>th</sup> ▪ Workshops and Tours

**9:00-4:00 Exhibits Open to the Public (Green Center)** (Free)

**9:00-4:30 Smart Energy Living® Consumer Workshops (Additional fee)**

1.5 Hour Workshops (Green Center):

1. Emerging Green Technologies
2. Retrofit Energy Inefficient Homes
3. Wind Energy & Geothermal Energy
4. Careers in Green Jobs
5. Water Conservation in & around Your Home
6. Solar Photovoltaic & Solar Thermal Basics
7. Do-it-yourself Energy Auditing & Improvement
8. Zero Energy Homes

**10:00-2:30 Home Tour** (Self-guided - \$15)