

Power Curve Working Group Agenda

17th Meeting, Wednesday 10th August 2016

NREL/National Wind Technology Center, 18299 State Highway 128, Louisville, CO, USA

Welcome/Registration:

- 9.00am-9.30am: Tea/Coffee will be available.

Morning Presentation Session: 09.30 -13.00

- 09.30-09.40: Welcome, Jason Fields (NREL)
- 10.40-10.10: Update on the Power Curve Working Group, Peter Stuart (RES)
- 10.30-11.00: IEC 61400-1 Ed 2 Uncertainty Methodology (PCWG & IEC Task 32 Interaction)
 - IEA Task 32 Round Robin on 12-1 Ed. 2 Power Performance Measurement Uncertainty using Lidar, Peter Stuart on behalf of Luke Simmons (DNV GL)
 - Open Source Worked Examples of IEC61400-12-1 Ed 2 Uncertainty Methodology, Peter Stuart (RES)
- 11.00-11.15: Coffee
- 11.15-11.30: Presentation: "A New Toolbox for Analyzing Wind Plant Data", Elise Penn (NREL)
- 11.30-12.30: PCWG Intelligence Sharing Initiatives (PCWG-Share-X)
 - Current Status
 - PCWG Analysis Tool Updates
 - Interpolation Issue
 - Next Steps

Lunch: 12:30 – 13:30 (Note: if you require a vegetarian meal please notify beverly.cisneros@nrel.gov)

Afternoon Presentation Session: 13.30-15:00

- "OWA LiDAR Power Performance Project", Peter Stuart (RES)
- "Metrological validation and operational assessment of a new 4-beam turbine-mounted Lidar", Evan G. Osler (Renewable NRG Systems)
- "Defining turbine-specific performance adjustments – the next frontier", Carl Ostridge
- Inner Range Performance Framework, Presenter TBC

Afternoon Discussion Session: 15.00-16:00

Wrap Up: 16.00 – 16.30

Pre-meeting

Venue: NREL/National Wind Technology Center, 18299 State Highway 128, Louisville, CO.

Two pre-meeting activities are planned on Tuesday the 9th of August (the day before the main PCWG Meeting).

- **9:30am – 11:30am: NREL Site Tour**
- **1.00pm – 4.00pm: PCWG Analysis Tool Working Session** - Bring you data and learn how to contribute to the PCWG intelligence sharing initiative (PCWG-Share-X).

REGISTRATION FOR PRE-MEETING ACTIVITIES IS NOW CLOSED

Venue & Logistical Information

NREL Organizational Contact:

Beverly Cisneros
beverly.cisneros@nrel.gov

+1 (303) 384-6979 (phone)
+1 (303) 883-4653 (cell)

Venue

Meeting Place: NREL/National Wind Technology Center, 18299 State Highway 128, Louisville, CO

The National Renewable Energy Laboratory's (NREL's) National Wind Technology Center (NWTC), located at the base of the foothills just south of Boulder, Colorado, is the nation's premier wind energy technology research facility. Built in 1980, the center provides an ideal environment for the development of advanced wind energy technologies. The goal of the research conducted at the center is to help industry reduce the cost of energy so that wind can compete with traditional energy sources, providing a clean, renewable alternative for our nation's energy needs.

Transportation:

We recommend that you fly into Denver International Airport.

Airport Shuttle Service:

Boulder Super Shuttle
1-800-433-4344

*The fee is \$27 one way, \$50 round trip.

The Boulderado front desk staff will be happy to assist with reservations.

The RTD A/B bus: SkyRide-Runs frequently between Boulder and Denver, especially during rush hour. The fee is \$13.00 (exact change required in local currency) Route departs hourly at approximately 15 – 20 minutes after every hour. Final stop is three blocks from the Hotel Boulderado in the center of Boulder.

www.rtd-denver.com/airport.shtml

The University of Colorado A Line: A Line is 23 miles of rail that is making local and international travel easier than ever. The new line provides easy, affordable and reliable connections between downtown Denver, Denver International Airport, and the many communities along I-70. With connections at Union Station to the C, E and W light rail lines, the G and B commuter rail lines later this year and local and regional buses, your public transportation options now have an international connection.

www.rtd-denver.com/a-line.shtml

Taxis: Taxis are available for transportation.

DIA to Boulder = Approx. \$90.00 + \$3.50 Gate Fee

Boulder to DIA = Approx. \$90.00

Directions by car:

From Denver International Airport, to the Hotel Boulderado: Total distance is about 45 miles.

No Toll: Departing DIA continue straight onto Peña Blvd for about 10 miles. Merge onto I-70 West. Make a slight right at I-270 West (signs for I-270 West/Ft. Collins). Continue onto US-36 West. After you enter Boulder, turn left at Canyon Blvd. for 1.1 miles. Turn right at 13th Street. The Hotel Boulderado will be on the left at 2115 13th, Boulder, CO 80302.

Toll: From Denver International Airport, exit the airport via Peña Boulevard. In about 3 miles, take exit 6B toward Boulder/Ft. Collins to E-470. E-470 will turn into the Northwest Parkway. Take the Northwest Parkway west to U.S. Hwy 36. At the end of the Northwest Parkway, take the ramp onto US Hwy 36 West to Boulder. After you enter Boulder, Turn left at Canyon Blvd. for 1.1 miles. Turn right at 13th Street. The Hotel Boulderado will be on the left at 2115 13th, Boulder, CO 80302. (Toll paid through rental Car Company.)



Map from Denver International Airport to Boulder via the non-toll route.

Lodging:

Choice Hotel:

Renaissance Boulder Flatiron Hotel

500 Flatiron Boulevard, Broomfield, CO. 80021

www.marriott.com/denir

Distance to the NWTC from this hotel is 8 mins / 4.00 miles.

The rate at the Renaissance Flatiron Hotel is the current government per diem rate.

By Phone: Call hotel at 303.464.8400 or Renaissance Reservations Toll-Free at 1.888.236.2427. When calling, ask for the "NREL Rate" to access the corporate travel rate at government per diem.

Other Hotel:

The Hotel Boulderado in Boulder Colorado and the **Renaissance Boulder Flatiron Hotel** is the recommended choice for lodging. Many of the rooms feature spectacular views of the Rocky Mountain foothills. **The Hotel Boulderado** has an atmosphere of Victorian elegance and is centrally located downtown, one block from the city's famous Pearl Street Pedestrian Mall. The hotel has become a National Register Landmark and is a member of the National Trust's Historic Hotels of America.

www.boulderado.com

The best time to make reservations is between standard business hours, Monday through Fri.

Please call **1-800-433-4344** to make your reservations.

(Group rates are not available through the web-site)

Cancellations Must Be Made By 4:00 P.M. The Day Prior To Arrival

Room Rates Do Not Include 12.40% Tax

(Tax Rate Subject to Change)

Rates based on single and double occupancy. \$15 per Additional Guest

Valet Parking ~ Is Not Included

Check-In Time ~ 4:00 P.M. Check-Out Time ~ 11:00

Currency:

US Dollar. All major credit cards accepted.

Visas:

Please contact your travel agent or local US embassy if you are unsure of Visa requirements.

If a special invitation letter is needed, please contact Beverly.

Hotel
Boulderado



RTD
Transit Center

Renaissance Boulder Flatiron Hotel • 500 Flatiron Boulevard • Broomfield, CO. 80021
www.marriott.com/denir

A Starting Location

Renaissance Boulder Flatiron Hotel

500 Flatiron Boulevard

Broomfield, Colorado 80021 USA

Phone: 1 303 464 8400

B Ending Location

NWTC 18299 W. 120th Ave

Louisville, CO 80303

