

IN THIS ISSUE:

- Ambient Energy's Work from the Train to the Plane
- Earth Day Events in Denver and San Francisco
- Colorado Adopts New Building Code
- Don't Ruin the Future – Link to CNN Article
- ASHRAE Modeling Conference
- Community Involvement
- Speaking Engagements and Activities
- Project Highlights

AMBIENT ENERGY'S WORK ON THE "TRAIN TO THE PLANE"

By Crystal Lutgens, Marketing / Business Manager



All aboard! Ambient Energy was fortunate enough to work on both Union Station and Denver International Airport's Hotel and Transit Center projects, two of Denver's most iconic projects in the last decade! Our team is proud to have been a part of these projects that will change the urban landscape of Denver for decades to come.

Ambient Energy performed sustainable design facilitation and energy analysis for Denver Union Station's Bus Box (S.O.M. Architects and Kiewit Construction) which achieved a LEED Silver rating and sustainable design facilitation for Denver Union Station's Hotel and Mixed Use Redevelopment (Tryba Architects and Melinder-White Construction) which achieved a LEED Certified rating.

Where the light rail from Union Station meets the airport, at DIA's Hotel and Transit Center, Ambient Energy performed sustainable design consulting, energy and daylight analysis and commissioning services (Gensler and Mortenson-Hunt-Saunders Joint Venture) for this new 523,000 sf building. This project is pursuing a LEED for New Construction Gold or higher rating.

As Denver is growing and evolving, with one of the highest urban population growth rates in the country, the Ambient Energy team is excited to be part of it! Happy Earth Day!

EARTH DAY EVENTS

EARTH DAY DENVER EVENTS:

When: Friday, April 22 from 10 a.m. - 2 p.m.

Where: Union Station, coinciding with RTD's launch of the University of Colorado A Line to the airport. [RTD Station Party Information.](#)

Inclement Weather Backup Location: Wellington Webb Municipal Building Atrium, 201 W Colfax Ave

Who: Earth Day Denver is free and open to the general public. We especially encourage residents, employees, community partners, and teachers and students in the downtown area to visit the event and learn new ways to live sustainably!

Theme: 2016's event will focus on interactive displays and demonstrations for the public tied to: My Home, My Work, and My Community.

Green Event Certification: In addition to minimizing waste at Earth Day Denver, the [Certifiably Green Denver](#) program is ensuring the event meets criteria to be a sustainable and certified green event.

[Doors Open Denver](#), Get an insider's look at some of Denver's most iconic and historic locations.

Celebration of our beautiful planet Earth with live music, art, photography and video! Learn about Zero Waste and fun and easy ways to be good stewards of our Mother Earth!

When: Monday, May 23, 2016 from 7:00 PM to 10:00 PM (MDT)

Where: Eloise May Library (Arapahoe Libraries) - 1471 South Parker Road, Denver, CO 80231 - [View Map](#)

EARTH DAY SAN FRANCISCO EVENTS:

When: Saturday, April 23 from 10 a.m. - 7 p.m.

Where: 22nd Street (between Mission and Valencia), SF

Who: [Earth Day SF Street fest](#) is free and open to the general public. **E.D.S.F. will continue to promote community involvement, solution based green initiatives, Eco activism, social justice, health and well-being, the arts and earth justice.**

Theme: 2016's event will focus on hands on DIY workshops, Alternative Energy and Electric Vehicles, Sustainable Green Fashion show, Eco Carnival kids zone and Organic food court etc.

Earth Day Beach Cleanup events: Come on down and help save the beach!

When: Saturday, April 23, 2016 from 9:00 AM to 12:00 PM

Where: Ocean Beach, Stairway 17, Great Highway, San Francisco, CA [View Map](#)

Who: Surfrider Earth Day Beach Cleanup - Ocean Beach

When: Saturday, April 23, 2016 from 9:00 AM to 11:00 AM

Where: Multiple locations from SF to Half Moon Bay! [View Map](#)

Who: For the 12th year in a row, [Pacifica Beach Coalition](#) is organizing one of the largest eco-friendly events of the Peninsula.

The coupon Project has compiled a list of [Earth Day Freebies!](#)

Find Earth Day Events worldwide with this great [interactive map](#)

DENVER ADOPTS NEW VERSION OF ENERGY CODE

By Kevin Perri, Commissioning Agent

Parts of the State of Colorado adopted the newest version of the energy code as early as April of 2015, with Denver just adopting the code in March of 2016. This means that all projects in Denver submitting for permit will need to adhere to the 2015 version of the International Energy Conservation Code (IECC) and/or the 2013 version of American Society of Heating, Refrigeration, and Air-Conditioning Engineers 90.1 (ASHRAE). Before this new adoption, Colorado was following IECC 2009 and ASHRAE 90.1-2007 versions of the energy code, therefore this adoption skips a whole code cycle and improves efficiency by up to 25%. Current status of state adoptions can be found here:

<http://bcap-energy.org/code-status/local-adoptions/#co>

Whenever a new code is adopted there is a period of adjustment for all. Jurisdictions adopting the code need resources in place to be able to implement the new requirements. The Architect, Engineer, and Contractor (AEC) community needs to ensure they are up to speed on the new processes, efficiency requirements, and inspections. Ambient Energy and the Weifield Group have teamed up and are helping to shorten that transition period by presenting the changes to the energy code to different jurisdictions and the AEC community.

Commissioning is required as part of this code change. This means new buildings, renovations and additions that are approximately 15,000 sf or more will need to have a Commissioning Authority verify installation and performance of equipment. Determination of this requirement is based on the building's HVAC system capacities. Ideally performance testing would happen before the project is turned over. However, due to tight schedules at the end of a project, that's not always the case. The IECC states that preliminary Commissioning has to be completed before the project can request final inspection. The City and County of Denver has taken it a step further and amended this section to say the Commissioning Report has to be provided to the code official in order to call for final inspection. This is great news for an owner as they are getting a brand new, fully functional building. Some people see this as a burden to meet new efficiencies and other requirements, but it truly is for the better of everyone. This not only makes buildings more efficient, it also reduces energy costs, lowers the amount of greenhouse gas emissions, and creates more comfortable spaces for occupants, which boosts productivity.

Ambient Energy and RNL are working on the first commercial project together which has submitted for permit in Denver under the 2015 IECC. Ambient Energy is providing commissioning, energy and sustainability services.

One of Ambient Energy's own Commissioning Engineers, Kevin Perri, was the first person in the state to be certified as a 2015 IECC Commercial Energy Plans Examiner/Inspector with ASHRAE 90.1-2013. To request more information about the 2015 IECC presentation or more information on how Ambient Energy can assist with code changes please contact kevin@ambient-e.com.

DON'T RUIN THE FUTURE SEVEN CLIMATE CHANGE SOLUTIONS

John D. Sutter is a columnist for CNN Opinion who focuses on climate change and social justice. Earlier this year, John sent an email to CNN readers asking for solutions to climate change... OF the 452 ideas logged, John has liked and expanded seven of the most relevant solutions.

[Here is the link to the full article!](#)

ASHRAE ENERGY MODELING CONFERENCE

By Yijia Wang, Building Performance Engineer

Recently, I represented Ambient Energy's, Building Performance Engineering team in an "EnergyPlus for practitioners" training in Denver, Colorado. As a frequent user of OpenStudio, which is a required software by Xcel Energy's Energy Design Assistance (EDA) program, the training was an excellent chance to understand how OpenStudio is working under the structure of the energy simulation software EnergyPlus, which helps users to gain a better understanding and leverage powerful whole-building energy analysis. The EDA program provides commercial building Owners in Xcel Energy service territory with funding based on demand reductions captured through an energy analysis process that begins in early stages.

After a brief introduction by trainers from Big Ladder software the training kicked off with a tight two-day schedule covering topics including "Simulation Control, Envelope, Internal Gains, Airflows, Daylight, Zone HVAC, Plant Systems and Air Systems". The practitioners from all around the country, were guided through the complexity of EnergyPlus syntax, input/output files, documentation and essential software including OpenStudio (legacy) plugin for SketchUp. Hands-on experience was illustrated all throughout the program, with the trainers helping each individual solve their own problems while performing an energy simulation in EnergyPlus. With this training, I am able to create, run and debug EnergyPlus models with speed and accuracy which makes a highly productive starting point for continuous work with project models. The new OpenStudio is much more stable and less "buggy" compared with the OpenStudio plugin for SketchUp, which often crashed when working on large complex projects. Even though this is a training mostly targeting solving problems with energy analysis happening "under the hood" of OpenStudio, the simulation software EnergyPlus can work with another program to interface as well, such as DesignBuilder. Overall, this training helps our team command the tool to work for us, such as setting up meters or adding a specific control strategy, which makes us all stronger energy modelers.

This experience with EnergyPlus training supported by Xcel Energy reflects that Ambient Energy is greatly involved with the EDA process and keeping up with the most recent updates in the energy efficiency industry, which is one of the aspects of how we work towards a resilient and regenerative world to have a positive impact on the world.

COMMUNITY INVOLVEMENT



COLORADO

In addition to our annual sponsorship of the USGBC Colorado Chapter, Ambient Energy is a Track Sponsor for the chapter's annual Rocky Mountain Green conference on April 21st and 22nd. Ambient Energy's Sustainability Team Leader, Clayton Bartczak, who is also on the Chapter Board of the USGBC, is serving as the volunteer Track Manager as part of his involvement with the Rocky Mountain Green committee and is also speaking in two sessions: A Thursday workshop on the LEED Dynamic Plaque and a Friday panel discussion on Sustainability and Affordable Housing. His role in the affordable housing presentation will be primarily to share his experiences volunteering as a Team Leader for Habitat for Humanity's Global Village program, having led teams to Nicaragua, Honduras, Malawi, and El Salvador. Hope to see you there! <http://usgbccolorado.org>

UPCOMING SPEAKING ENGAGEMENTS AND ACTIVITIES:

- April 21-22, Clayton speaks at Rocky Mountain Green, Colorado Chapter of USGBC's annual conference, Denver
http://usgbccolorado.org/content.php?page=rocky_mountain_green
 1. ***Brick by Brick: How affordable housing organizations are implementing sustainable design and construction in the U.S. and abroad***
 2. ***The Alliance Center and LEED: Dynamic Plaque and the Future of Ongoing Certification with USGBC***
- April 22-23, Celebrate Earth Day! See article above for Denver and San Francisco Events
- April 29, Linda and Eric speaking on ***Net Zero Energy Lessons Learned***, Rocky Mountain ASHRAE Conference, Denver
- May 11-13, Renee speaks on a panel to discuss ***the Business Case For Transparency and JUST***, Living Futures unConference, Seattle
<http://www.livingfutureunconference.org/>

PROJECT HIGHLIGHTS

Ambient Energy is busy! Here are some of the projects we have been working on over the past quarter.

- 1500 Mission, Goodwill Site, Office and Residential Project, Energy Modeling and Daylight Analysis, San Francisco, CA
- Aspen Civic Space Relocation, Commissioning, Aspen, CO
- San Francisco International Airport, Terminal 1, Project Management Support Services, San Francisco, CA
- Denver Water Campus Redevelopment, energy, sustainability and commissioning consulting, Denver, CO
- Colorado Higher Education: CU Denver North Classroom, CU Denver Wellness Center, Commissioning, Denver; CSU Chemistry, Biology, Art, Medical Center
- Convent of the Sacred Heart, Energy Audits, San Francisco, CA
- Barstow Marine Corp Logistics Base, HVAC Controls Audits, Barstow, CA
- Kirtland AFB, Energy Audit, Fort Carson, CO