

RESNET BUILDING PERFORMANCE CONFERENCE

#RESNET19 AT A GLANCE
GO FORWARD TOGETHER

2019
Conference

New Orleans, LA • Feb 25-27

RESNET
RESIDENTIAL ENERGY SERVICES NETWORK

ABOUT CONFERENCE

The RESNET Building Performance Conference is the premier national forum on home energy ratings, existing home retrofits, building codes and energy policy.

The RESNET Building Performance Conference offers strategic options to business challenges and provides a venue where you can obtain usable solutions in an evolving industry. This is the place to network with the best building performance professionals and obtain crucial information on the home performance industry.



RESNET 2019 DETAILS

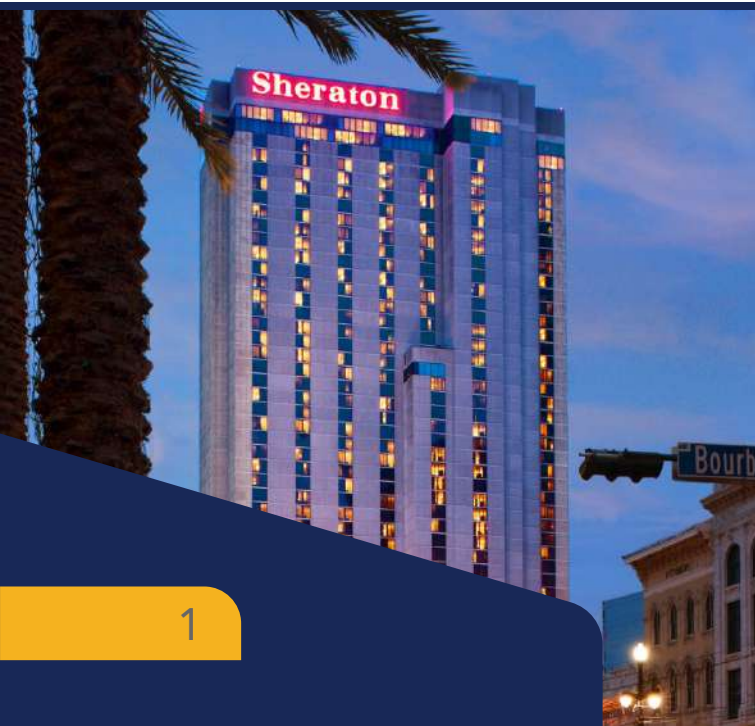
The 2019 RESNET Building Performance Conference will take place on February 25 - February 27 in New Orleans, LA (NOLA) at the Sheraton in downtown NOLA.

Our theme this year is “Let Us Go Forward Together,” and given the New Orleans location. We’ve also adopted a conference motto of “Work Hard, Play Hard”.

SHERATON NEW ORLEANS HOTEL

**500 Canal Street
New Orleans, LA 70130**

Set in the vibrant French Quarter, the hotel is on the Parade Route and guests are within walking distance of Bourbon Street.



WHY ATTEND?

- Over 100+ educational sessions, including pre-conference sessions
- Great networking opportunity with other industry professionals
- 50 exhibiting companies in an exciting, dynamic expo hall
- A chance to earn 18 Professional Development Credits
- Let the good times roll in NOLA!

RESNET 2019 REGISTRATION

Conference registration includes the general session, all breakout sessions, access to the trade show, lunch, breaks and two evening receptions. RESNET Certified Raters and RFIs will earn 18 hours of professional development credits by attending all three days of the conference.

CONFERENCE REGISTRATION

Member Registration - \$650

Non-Member Registration - \$800



QUESTIONS? CONTACT

EMMA BENNETT

E-MAIL: emma@resnet.us

PHONE: 760-448-0914

WEBSITE: <https://conference.resnet.us>

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2019 SPONSORS

THANK YOU FOR YOUR SUPPORT



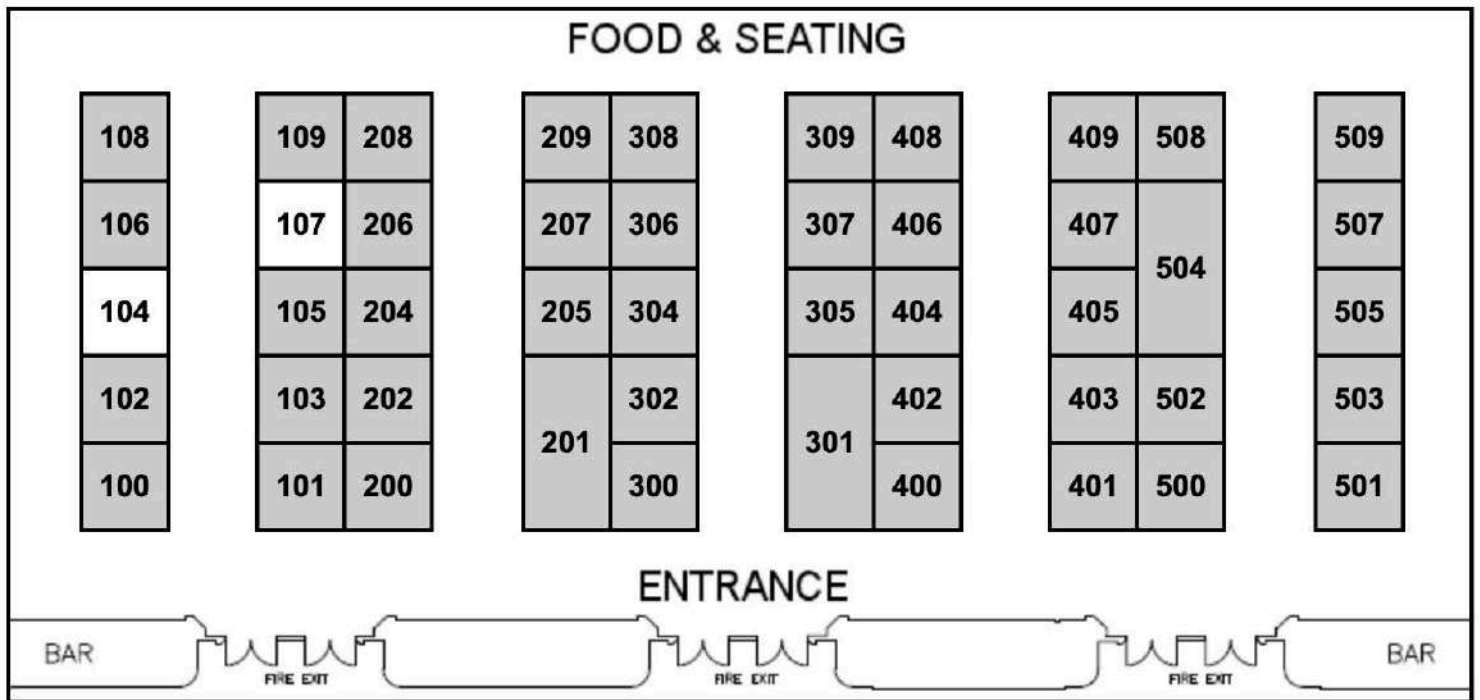
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EXHIBIT HALL MAP

CURRENT EXHIBITORS



Air King
Booth #: 102

AirCycler®
Booth #: 101

AM Conservation Group
Booth #: 408

APA - The Engineered
Wood Association
Booth #: 307

Aprilaire
Booth #: 501

Broan
Booth #: 401

Building Efficiency
Resources LLC
Booth #: 409

Centricity
Booth #: 507

Chargin Station -
Sponsored by Skytec
Booth #: 105

Delta Electronics
(Americas) Ltd.
Booth #: 503

DuPont Building
Innovations
Booth #: 100

Ekotrope
Booth #: 208

Elite Software
Booth #: 505

EnergyLogic
Booth #: 209

EnergySMAC
Booth #: 103

Field Controls
Booth #: 406

Florida Solar Energy
Center
Booth #: 306

Greenheck
Booth #: 404

High Performance
Insulation Professionals
Booth #: 508

Indoor airPLUS
Booth #: 400

InspectorTools
Booth #: 108

International Code
Council
Booth #: 200

Johns Manville
Booth #: 309

Kwik Model
Booth #: 405

LifeBreath
Booth #: 402

Mitsubishi Electric
Cooling & Heating
Booth #: 207

Niagara Conservation
Booth #: 403

NORESCO
Booth #: 300

Owens Corning
Booth #: 201

Panasonic Eco Solutions
Booth #: 204

Passive House Institute
US
Booth #: 202

Pivotal Energy Solutions
Booth #: 509

Professional Photo Booth
- Sponsored by Dividend
Finance
Booth #: 504

QC Manufacturing, Inc
Booth #: 500

Retrotec
Booth #: 301

Rheem Water Heating
Booth #: 106

ShakeltUp Tech
Booth #: 109

Tape Guys (formerly
ThermalStar)
Booth #: 302

The Energy
Conservatory
Booth #: 308

Trane
Booth #: 205

TruTech Tools, LTD
Booth #: 407

U.S. EPA's WaterSense
Program
Booth #: 304

Ultra-Aire Dehumidifiers
Booth #: 206

Vent Cap Systems
Booth #: 305

CONFERENCE SCHEDULE OVERVIEW

PLEASE NOTE THAT SCHEDULE IS SUBJECT TO CHANGE

SATURDAY - FEBRUARY 23, 2019

8:00 AM – 5:00 PM

PASSIVE HOUSE INSTITUTE U.S. TRAINING

SUNDAY - FEBRUARY 24, 2019

8:00 AM – 5:00 PM

PASSIVE HOUSE INSTITUTE U.S. TRAINING (CONTINUED)

8:00 AM – 12:00 PM

PRE-CONFERENCE SESSIONS

- THE AXIS DATA COLLECTION, STORAGE, AND SHARING PLATFORM
- SAVING ENERGY AND SAVING (HOT) WATER IN NEW HOMES
- EKOTROPE RATER - ORIENTATION, TRAINING, AND PRODUCT FEEDBACK SESSION
- HVAC DESIGN NOT FOR DUMMIES... BUT FOR THOSE OF US WHO REALLY CARE

8:30 AM – 12:00 PM

IECC TEST PREP

12:00 PM – 5:00 PM

RESNET ATTENDEE REGISTRATION OPEN – *GRAND BALLROOM FOYER*

1:00 PM – 5:00 PM

PRE-CONFERENCE SESSIONS

- THE NEXT GENERATION OF HOUSERATER AND REM/RATE: 2019 Preview
- ALIGN BY DESIGN: Advancing the Modern Grid Capabilities of Tomorrow, Starting Today

1:00 PM – 5:00 PM

IECC TEST

5:00PM – 6:30 PM

NAIMA RECEPTION – *WATERBURY ROOM*

MONDAY - FEBRUARY 25, 2019

7:00 AM – 5:00 PM

RESNET ATTENDEE REGISTRATION OPENS – *GRAND BALLROOM FOYER*

8:30 AM – 10:00 AM

OPENING GENERAL SESSION – *ARMSTRONG ROOM*

- SESSION CALLED TO ORDER – Steve Baden, RESNET Executive Director
- WELCOME TO THE 2019 RESNET CONFERENCE – RESNET Board President, Matt Gingrich
- "LET US GO FORWARD TOGETHER" – Steve Baden
- "THE EMERGING NEXUS BETWEEN THE HERS® AND REAL ESTATE INDUSTRIES – Sandra Adomatis, Adomatis Appraisal Service
- RESNET/CRESNET CROSS BORDER CHALLENGE AWARDS PRESENTATION

10:00 AM – 10:30AM

MORNING BREAK – *GRAND BALLROOM FOYER*

10:30 AM – 12:00 PM

MONDAY BREAKOUT SESSION 1

- US HOUSING MARKET – The Good, the Bad, the Ugly
- RESNET QUALITY ASSURANCE – Where Are We Today?
- EVOLVING TOWARD ZERO IN AFFORDABLE
- HOW THE SAUSAGE IS MADE: The RESNET Standards Development Process
- ENERGY STAR: The Year Ahead
- FROM ZERO ENERGY TO ZERO EMISSIONS: The Transition to Carbon as an Efficiency Metric
- 3 PATHS TO RESIDENTIAL FRESH AIR
- RENOVATIONS AND ADDITIONS: Inside the First Program to Penetrate this Untapped Market with Huge Potential for Raters and Utilities!
- NEW ROOFING TECHNOLOGY-ELIMINATE CONDENSATION IN OPTIMIZED HVAC DESIGNS WITH RADIANT BARRIERS AND BURIED DUCTS IN HIGH PERFORMING ATTICS

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SCHEDULE OVERVIEW (CONTINUED)

PLEASE NOTE THAT SCHEDULE IS SUBJECT TO CHANGE

MONDAY - FEBRUARY 25, 2019

12:00 PM – 1:15 PM

LUNCH – GRAND BALLROOM

12:00 PM – 3:30 PM

EXHIBIT HALL OPEN – GRAND BALLROOM

1:30 PM – 3:00 PM

MONDAY BREAKOUT SESSION 2

- THE HERS VALUE AND POTENTIAL LIABILITY IN THE APPRAISAL PROCESS
- TOP 10 QA FINDINGS COUNTDOWN
- ENHANCING THE CONSISTENCY OF THE CALCULATION OF HERS INDEX SCORES –
The RESNET Software Consistency Committee
- NEW BUSINESS OPPORTUNITIES FOR HERS RATERS – RESNET Positioning HERS Raters as
the Go to Resource for Energy Code Compliance Verification
- TOUR OF ZERO
- KB HOME PROJEKT – Tomorrow's Housing Today
- ANSI/RESNET/ICC STANDARD 301-2019: What has Changed Since 2014 &
How it Addresses Multifamily
- BUILDING PERFORMANCE AS A NATIONAL POLICY INITIATIVE IS BACK ON THE TABLE –
The Results of the 2018 Congressional Election and What it Means
for the Building Performance Industry
- RESNET ELC INTRODUCES NEW RECRUITMENT TOOLKIT

3:00 PM – 3:30 PM

AFTERNOON BREAK – GRAND BALLROOM FOYER
SPONSORED BY MAGRANN ASSOCIATES

3:30 PM – 5:00 PM

MONDAY BREAKOUT SESSION 3

- RESNET BOARD TOWNHALL MEETING – Opportunity to Have a Dialogue with Your
RESNET Board Representatives
- WATER EFFICIENCY INNOVATIONS: How to get credit in the Water Rating Index
and HERSH2O?
- IAQ, VENTILATION, AND AIRTIGHTNESS in High Performance New and Existing Homes
- NAVIGATING THE RAPIDS: Steering New Homes Programs Through Energy Code Changes
- WHAT YOU DON'T KNOW YOU DON'T KNOW ABOUT (HOT) WATER
- 2019 CROSS BORDER BUILDER CHALLENGE LOWEST HERS SCORE AWARDS
- GROWING THE NUMBER OF NEW HERS-RATED HOMES ACROSS AMERICA:
RESNET's 2019 Marketing Plan
- 5 AIR SEALING PRIORITIES IN NEW HOME CONSTRUCTION
- RATERS, REALTORS, AND REFERRALS

5:30 PM – 7:30 PM

EVENING RECEPTION / EXHIBIT HALL OPEN



SCHEDULE OVERVIEW (CONTINUED)

PLEASE NOTE THAT SCHEDULE IS SUBJECT TO CHANGE

TUESDAY - FEBRUARY 26, 2019

7:00 AM – 5:00 PM

RESNET ATTENDEE REGISTRATION OPENS – GRAND BALLROOM FOYER

8:30 AM – 10:00 AM

TUESDAY BREAKOUT SESSION 1

- GROW YOUR RATING CAREER WITH ADDITIONAL CERTIFICATIONS
- CHOOSING SUSTAINABLE MATERIALS: Science for Saving Energy, Water the Environment and Humanity
- OH NO! INCONSISTENCY IN CALCULATING RESNET/ICC ANSI STANDARD 301 AND 2018 INTERNATIONAL CONSERVATION CODE SECTION 406 COMPLIANCE SCORES
- TO NOTCHES UNKNOWN –
A Goal 90% of All New Homes Rated by HERS Raters – What Would it Take?
- NOW AVAILABLE! THE ENERGY STAR MULTIFAMILY NEW CONSTRUCTION PROGRAM
- TAPPING THE REAL ESTATE MARKET FOR ENERGY PERFORMANCE
- A CASE STUDY OF A HERS RATED ACTIVE SENIOR COMMUNITY –
St. George, Utah's SunRiver Development
- QUALITY ASSURANCE DATA FILES MADE EASY
- SELLING & MARKETING: A How-to By & For Builders

10:00 AM – 10:30 AM

MORNING BREAK – GRAND BALLROOM FOYER

10:30 AM – 12:00 PM

TUESDAY BREAKOUT SESSION 2

- RESNET RATER INSTRUCTOR ROUNDTABLE
- THE SHAPE OF THINGS TO COME – Manufactured Component Home Building and Potential Effects on the HERS Industry
- 2021 IECC: Potential Changes to the Energy Code that can Impact Residential Buildings
- EARNING HERS POINTS FOR QUALITY HVAC DESIGN & INSTALLATION
- HOW TO UPSERVE YOUR HIGH-PERFORMANCE BUILDERS
- FROM LISTING TO CLOSING: The Role of HERS in the Real Estate Transaction Process
- A NATIONAL RETROFIT CHALLENGE TO MEET THE PARIS GOAL OF 1.5 DEGREES
- HOW LOW CAN WE GO? HOW CLOSE CAN WE GET?
- SCALING UP HIGH PERFORMANCE BUILDING

12:00 PM – 1:15 PM

LUNCH – GRAND BALLROOM

12:00 PM – 3:30 PM

EXHIBIT HALL OPEN – GRAND BALLROOM



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SCHEDULE OVERVIEW (CONTINUED)

PLEASE NOTE THAT SCHEDULE IS SUBJECT TO CHANGE

TUESDAY - FEBRUARY 26, 2019

1:30 PM – 3:00 PM

TUESDAY BREAKOUT SESSION 3

- CALIFORNIA DREAMIN' – Path to Net Zero Energy Homes – California Zero-Net-Electricity New Homes Energy Code
- HOW TO USE CONSUMER IAQ MONITORS TO CREATE A HEALTHIER HOME
- THE DATING GAME: Energy Code Style
- WHAT'S IN STORE FOR THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE CYCLE
- SELLING WATERSENSE
- NEW RESNET HERS INDEX MARKETING TOOL KIT FOR HERS RATERS
- LEVELING THE PLAYING FIELD ON RATING LARGE AND SMALL HOMES – RESNET Home Size Adjustment Factor for HERS Index Scores
- MOVING TOWARDS THE INTEGRATED HOME – Connected, Interactive, Interoperable, and Efficient
- FROM MODELED TO MOVE IN – The Critical Relationship Between Rater and Builder

3:00 PM - 3:30 PM

AFTERNOON BREAK – GRAND BALLROOM FOYER
SPONSORED BY TOPBUILD HOME SERVICES

3:30 PM – 5:00 PM

TUESDAY BREAKOUT SESSION 4

- RESNET QA TEAM'S OBSERVATIONS FROM THE FIELD
- AIRFLOW 2019
- LESSONS LEARNED FROM THE HERSH2O PILOT PHASE
- SAVE MORE, GET MORE: Utility Sponsored Programs and Incentive Design
- WHAT I LEARNED ON THE WAY TO 'ZERO'
- THE EVOLUTION OF ENERGY CODES
- MIDWEST TRENDS: Using Big (HERS) Data to Understand Residential Construction
- CONNECTING ENERGY EFFICIENCY, DURABILITY, SUSTAINABILITY AND RESILIENCE TO DESIGN BUILDING ENVELOPES
- MANAGING HVAC IN HIGH PERFORMANCE BUILDINGS – How to Provide Comfort, Safety, Health, and Reduce Builder Liability

5:15 PM – 6:15 PM

SDC300 ANNUAL MEETING - EDGEWOOD

5:30 PM – 7:30 PM

EVENING RECEPTION / EXHIBIT HALL OPEN

WEDNESDAY - FEBRUARY 27, 2019

8:30 AM – 10:00 AM

WEDNESDAY BREAKOUT SESSION 1

- RESNET ONLINE QUALITY ASSURANCE REVIEWS AND THE POWER OF QA GENIE
- LEARNING FROM EXPERIENCED HERS PROFESSIONALS
- WITH 16,000 HOME PERFORMANCE REPORTS, WE MUST BE DOING SOMETHING RIGHT
- THE RESNET – APPRAISAL INSTITUTE PARTNERSHIP: Implications for the Real Estate and HERS Industries
- ENERGY STAR MULTIFAMILY NEW CONSTRUCTION PROGRAM: Q&A
- MYTHBUSTING HOT WATER MISCONCEPTIONS
- THE NEW ASHRAE STANDARD 90.2-2018 FOR HIGH PERFORMANCE RESIDENTIAL BUILDINGS
- EMERGING TECHNOLOGY AND THE BUILDING INDUSTRY



SCHEDULE OVERVIEW (CONTINUED)

PLEASE NOTE THAT SCHEDULE IS SUBJECT TO CHANGE

WEDNESDAY - FEBRUARY 27, 2019

10:00 AM – 10:30 AM

MORNING BREAK – *GRAND BALLROOM FOYER*

10:30 AM – 12:00 PM

WEDNESDAY BREAKOUT SESSION 2

- WHO WE ARE – A Town Meeting with RESNET Staff
- MEET AND GREET: Get to Know Your Friendly Regional Energy Efficiency Organization
- DEVELOPMENT OF NEW RESNET ANSI CANDIDATE STANDARD ON RATING SAMPLING
- ADAPT AND OVERCOME: Hiring a Young Workforce
- 4TH ANNUAL ZERO ENERGY READY HOME LEADING HERS RATER ROUNDTABLE – PART I
- GETTING HERS TO ZERO: The New RESNET & NBI Zero Energy Certification Program
- REVIEWING THE RESEARCH: Making the Case for Mineral Fiber Insulation
- 380-2016 STANDARD AND CHANGES MADE FOR 2019
- DEBUNKING THE MYTHS: Why Decarbonization Does Make Sense in Residential New Construction

12:00 PM – 1:15 PM

LUNCH – *GRAND BALLROOM*

1:30 PM – 3:00 PM

WEDNESDAY BREAKOUT SESSION 3

- ADVANCED ENERGY REBUILD: A DisasterBrings Together Otherwise Unlikely Partners
- VENTILATION AND DEHUMIDIFICATION GEEKS - Thermodynamics Always Wins
- HVAC 101
- FROM HERS RATER TO CODE OFFICIAL
- 4TH ANNUAL ZERO ENERGY READY HOME LEADING HERS RATER ROUNDTABLE – PART II
- YOU'VE HEARD OF WATERSENSE AND YOU'VE HEARD OF HERSH2O.
BUT WHAT DO THE TWO HAVE TO DO WITH EACH OTHER?
- THERE'S AN APP FOR THAT! - Making Life Easier with Tips and Tricks to Use in the Field

3:00 PM - 3:30 PM

AFTERNOON BREAK – *GRAND BALLROOM FOYER*

3:30 PM – 5:00 PM

WEDNESDAY BREAKOUT SESSION 4

- WHO'S RIC AND HOW CAN SHE IMPROVE MY HERSH2O SCORE?
- RATINGS FOR ENERGY CODE COMPLIANCE
- DUCT TESTING, EXEMPT OR NOT EXEMPT?
- THE TOP 10 TECHNICAL CHALLENGES OF ZERO ENERGY READY HOMES
- LOWER HERS INDEX SCORES COMMAND BETTER SALES PRICE



2019 RESNET BUILDING PERFORMANCE CONFERENCE

PRE- CONFERENCE SESSIONS



SATURDAY,
FEBRUARY 23

8:30 AM – 5:00 PM

PASSIVE HOUSE INSTITUTE U.S. RATER TRAINING – DAY I

PRESENTERS: *Chris McTaggart, Building Efficiency Resources*

ROOM: *Evergreen*

This 2-day training includes one day of classroom work with a second day spent in the field demonstrating advanced testing and inspection protocols for the PHIUS+ Passive Building Standard certification program. Enclosure integrity design strategies Passive building mechanical/ventilation systems On-site verification of passive building construction features Airtightness/blower door testing protocols.

The course concludes with an exam. Successfully completing the course and exam qualifies the trainee as a PHIUS+ Rater.

SUNDAY,
FEBRUARY 24

8:30 AM – 5:00 PM

PASSIVE HOUSE INSTITUTE U.S. RATER TRAINING – DAY II

PRESENTERS: *Tony Lisanti, Intergral Building*

ROOM: *Evergreen*

This 2-day training includes one day of classroom work with a second day spent in the field demonstrating advanced testing and inspection protocols for the PHIUS+ Passive Building Standard certification program. Enclosure integrity design strategies Passive building mechanical/ventilation systems On-site verification of passive building construction features Airtightness/blower door testing protocols.

The course concludes with an exam. Successfully completing the course and exam qualifies the trainee as a PHIUS+ Rater.

PRE-CONFERENCE SESSIONS

(CONTINUED)

SUNDAY,
FEBRUARY 24

8:00 AM – 12:00 PM

THE AXIS DATA COLLECTION, STORAGE, AND SHARING PLATFORM

PRESENTER: Robert Burns, Pivotal Energy Solutions

ROOM: Gallier AB

Pivotal's AXIS platform is a cloud-hosted workflow and data management solution specifically designed for the collection, storage, and sharing of energy rating data. AXIS is used by leading energy efficiency program sponsors and utilities such as NEEA, Energy Trust of Oregon, and Arizona Public Service as a program administration, participation, quality assurance, and incentive processing platform for residential new construction programs. AXIS can also be used by HERS Raters, HERS Providers, and home builders to centralize energy rating and program-specific data. This session will provide an overview of the AXIS platform, integrations between AXIS and other technology solutions serving the energy efficiency market, data sharing functionality specifically serving the real estate and appraisal markets, and a glimpse into the future of the AXIS platform.

SAVING ENERGY AND SAVING (HOT) WATER IN NEW HOMES

PRESENTER: Gary Klein, Gary Klein & Associates

ROOM: Edgewood AB

Which floor plans meet the WaterSense for Homes or Net-Zero Ready requirements for hot water distribution systems? Are there any hot water distribution systems that can deliver hot water to every plumbing fixture and appliance within 15 seconds after opening the tap? Learn how to improve customer satisfaction by improving the water, energy and time efficiency of the hot water systems in your new home designs.

EKOTROPE RATER – ORIENTATION, TRAINING, AND PRODUCT FEEDBACK SESSION

PRESENTER: Cy Kilbourn, Ekotrope

ROOM: Bayside B

All types of attendees are welcome, whether unfamiliar with Ekotrope or already ramped up and using the tool. The first part of this session will feature a demo and product walkthrough, highlighting both basic functionality and advanced features. The session will then move to question and answer format to answer users' questions about the product, and finally end with an interactive discussion about users' needs and potential product improvements.

HVAC DESIGN NOT FOR DUMMIES... BUT FOR THOSE OF US WHO REALLY CARE

PRESENTER: Paul Raymer, Heyoka Solutions

ROOM: Bayside A

Have you ever seen a proposal from an HVAC Contractor or their "Designer" and wondered, "Is this gonna come back to bite me?" Have you ever wanted to cross-check their work, or at least ask the right questions so you know what you're about to pay for or what you'll have to test and verify? Join us for an engaging, interactive workshop to learn the fundamentals of HVAC design from a long-standing member of the ASHRAE 62.2 Committee. We'll explore how proper design and installation are crucial, not just for a lower HERS score, but also for improved comfort, indoor air quality, and building durability. During the workshop, you'll also hear how thoughtful HVAC design can help a builder earn the ENERGY STAR and Indoor airPLUS new home labels, and you might even get a chance to practice just a moment of math! Don't miss this great opportunity to learn from years of industry experience in ventilation and heating/cooling design.

PRE-CONFERENCE SESSIONS

(CONTINUED)

SUNDAY,
FEBRUARY 24

8:30 AM – 12:00 PM

IECC TEST PREP

PRESENTER: *Chris McTaggart, Building Efficiency Resources*

ROOM: *Bayside C*

Learn the residential requirements of the 2015 International Energy Conservation Code (IECC) from this in-person class. Participants will be able to take the exam after the morning session on Sunday February 24th.

Log into your attendee registration to add this session <https://conference.resnet.us/conference-registration>
To register and pay for the exam visit: www.iccsafe.org/wp-content/uploads/RESNET-Special-Admin_2019.pdf

1:00 PM – 5:00 PM

IECC TEST

ROOM: *Bayside C*

The ICC Residential Energy Inspector/Plans Examiner Certification exam contains 50 questions. Once you begin the exam you will have two hours to complete it. The exam is open-book so please be sure to bring a copy of the 2015 IECC.

Please register for this session if you plan on taking the course before taking the exam. Sign up here:
www.iccsafe.org/wp-content/uploads/RESNET-Special-Admin_2019.pdf

THE NEXT GENERATION OF HOUSERATER AND REM/RATE: 2019 PREVIEW

PRESENTERS: *Mat Gates, Residential Science Resources, LLC; Michael Resech, Residential Science Resources, LLC; Brian Christensen, REM/Rate*

ROOM: *Bayside A*

In this pre-conference session, you will learn how to streamline ratings and save time by using HouseRater to collect field data, document test results, and send reports directly to your builder clients. You will also discover the latest in REM/Rate including new features, building science, and code compliance capabilities. The HouseRater and REM/Rate development teams will demonstrate new and advanced software features that will increase your proficiency and confidence in your ratings.

Learning Objectives:

- Learn how to streamline ratings using HouseRater.
- Understand how to customize reports for builder clients.
- Find out about the new features in the latest version of REM/Rate.
- Reduce the burden of data entry and repetitive tasks, particularly with multiple files.
- Learn about upcoming solutions in HouseRater & REM/Rate.

SUNDAY,
FEBRUARY 24

1:00 PM – 5:00 PM

ALIGN BY DESIGN: – ADVANCING THE MODERN GRID CAPABILITIES OF TOMORROW, STARTING TODAY

PRESENTERS: *Gary Klein, Gary Klein and Associates; Pres Kabacoff, HRI Properties; Brendan Moore, Ochsner Health System; Tommy Milliner, Milliner & Burke LLC; Myron Katz, Ph.D., Building Science Innovators, LLC; David Stets, Sierra Club Delta*

ROOM: *Oak Alley*

What if there were a simple way to:

Aggregate any numbers of utility customers so that their combined usage and available distributed energy resources could all be cleverly orchestrated and harmonized and, in less than a decade, result in negative energy bills for many of the same customers? and Empower customers to invest in their own zero and low-emission generation, energy efficiency and energy storage, in a way that makes it a great investment for all participants, doesn't burden non-participants, and provides New Orleans with a lower cost, more resilient and greener grid?

Never happen, you say?

A local developer proposes to revitalize the iconic, million square-foot Charity Hospital building (est. in 1736, at its current location since 1939, and abandoned since Hurricane Katrina) to create a multi-use civic center and affordable-housing complex, and, by combining these generation, efficiency and storage technologies, produce New Orleans's first sustainable microgrid. This will be enabled by a recently-proposed, utility rate design which allows participants to finance investments for buying and selling electricity, power, and resiliency, thereby permitting them to manage their electricity usage and income accordingly. These investments will contribute to a green economy, job-creation, and provide a sustainable model and teaching tool for those working in the green energy fields.

This presentation explains the concept, provides examples to show how and why it works, and describes ready-to-launch pilot projects for applying the new rates.

BREAKOUT SESSIONS

MONDAY,
FEBRUARY 25

8:30 AM – 10:00 AM

OPENING GENERAL SESSION

ROOM: *Armstrong*

Session Called to Order – Steve Baden, RESNET Executive Director

Welcome to the 2019 RESNET Conference – RESNET Board President, Matt Gingrich

“Let Us Go Forward Together” – Steve Baden

“The Emerging Nexus Between the HERS® and Real Estate Industries – Sandra Adomatis, Adomatis Appraisal Service

RESNET/CRESNET Cross Border Challenge Awards Presentation

10:30 AM – 12:00 PM

US HOUSING MARKET – THE GOOD, THE BAD, THE UGLY

PRESENTERS: *Clayton Traylor, Leading Builders of America; Matt Cooper, PEG; Stephen Wagner, Appraisal Institute*

ROOM: *Oak Alley*

The HERS Industry is heavily dependent on the housing market. There are bullish signs for the market – relative low mortgage interest rates, low unemployment rate and pent up demand for housing. There are also dark bearish clouds – shortage of construction labor, uncertain supply costs caused by trade disputes, many recent graduates with crippling high student debt. This session will try to make sense in these uncertain times. The session will feature a representative of the leading national production builders, a large HERS Rating company and the appraisal industry.

RESNET QUALITY ASSURANCE – WHERE ARE WE

TODAY? PRESENTERS: *Scott Doyle, Billy Giblin & Laurel Elam, RESNET*

ROOM: *Nottoway*

The landscape of RESNET Quality Assurance has significantly changed in the past several years and efforts have ramped up to ensure consistency. The RESNET QA Team has doubled, field QA reviews began in 2018 and technologies like QA Genie are being used. Attend this session to learn about these efforts and much more!

EVOLVING TOWARD ZERO IN AFFORDABLE MULTIFAMILY

PRESENTER: *Karla Butterfield, Steven Winter Associates, Inc.*

ROOM: *Grand Couteau*

Affordable multifamily construction poses both unique challenges and opportunities for healthy indoor environments and energy, water, and material efficiency. While scheduling and cost often dictate specifications, many housing authorities and lenders require demonstrated efficiency for funding. It's typical for a developer to start with a HERS rating or Energy Star and then evolve toward more rigorous programs like LEED or Zero Energy Ready Homes and Passive House. The progression involves building upon past successes, identifying challenges with the thermal envelope, and specifying small and efficient HVAC equipment.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

10:30 AM – 12:00 PM

HOW THE SAUSAGE IS MADE: THE RESNET STANDARDS DEVELOPMENT PROCESS*

PRESENTERS: *Rick Dixon, RESNET & Thiel Butner, Pando Alliance*

ROOM: *Grand Chenier*

Have you ever wondered if your comments on any of the draft standards are actually considered? Have you ever wondered how to comment on a part of the standard that isn't open for public comment? Have you ever come across equipment or building systems that don't seem to be addressed anywhere in the RESNET standards? Have you ever disagreed with how the standards handle a certain scenario? Have you ever wondered how RESNET's standards are developed? This session will address the step-by-step processes of standards development, with a focus on how you can get involved. It will also describe how you can keep track of what's currently in effect and what's coming soon.

ENERGY STAR: THE YEAR AHEAD FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTERS: *Dean Gamble, Rebecca Hudson & Elliot Seibert, EPA*

ROOM: *Bayside A*

If you go to just one ENERGY STAR session, this is the one for you! Get a quick recap of the program in 2018. Then, learn the latest on our major initiatives for 2019 – RaterPRO, HERS points for proper HVAC design and installation, our new unified Multifamily New Construction program, and Rev. 10. Finally, provide our team with input about how we can help you be even more successful with ENERGY STAR. By the end, you'll want to attend our entire track for a deeper dive on these topics and more.

FROM ZERO ENERGY TO ZERO EMISSIONS: THE TRANSITION TO CARBON AS AN EFFICIENCY METRIC

PRESENTERS: *Nic Dunfee, TRC Energy Services; David Goldstein, Natural Resources Defense Council; Charles Kim, Southern California Edison*

ROOM: *Bayside B*

As California is reaching both its statewide carbon reduction, and 2020 residential new construction zero net energy goal, we are realizing that our work has only begun. The state's carbon emissions goals call for another 40 percent reduction in carbon emissions by 2030, and legislation passed earlier this year calls for a carbon free grid, and a carbon neutral California by 2045. Within the building sector, this has led to more focus on zero emissions buildings and less on zero net energy (ZNE) buildings. This panel will explore why ZNE goals do not necessarily equate to zero emissions buildings, and how this has caused California to start rethinking the way we value building efficiency. Panelists will discuss what resulted from California's final push towards 2020 goals, and how the state is shifting to the new carbon emission mandates. Attendees will learn why carbon may be displacing energy use as the new metric of choice for efficiency.

3 PATHS TO RESIDENTIAL FRESH AIR

PRESENTER: *Patrick Nielsen, Broan*

ROOM: *Bayside C*

Today's tight residential dwellings are great for lower utility bills but are too often problematic for indoor air quality. A wide-range of harmful pollutants can accumulate including mold-causing excess humidity. The good news – there are a variety of ventilation solutions to fit most any situation, climate zone and budget. This session will include a review of the differences between local room ventilation and whole dwelling continuous ventilation, the relevant building codes/standards and most importantly the three basic methods of providing continuous fresh air: exhaust, supply and balanced.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

10:30 AM – 12:00 PM

RENOVATIONS AND ADDITIONS: INSIDE THE FIRST PROGRAM TO PENETRATE THIS UNTAPPED MARKET WITH HUGE POTENTIAL FOR RATERS AND UTILITIES!

PRESENTERS: *Cy Kilbourn, Ekotrope; Michael Berry, ICF; Mark Pignatelli, ICF*

ROOM: *Southdown*

New homes and existing homes get plenty of attention in the form of ratings and utility program incentives, but major renovation projects that also add floor area to the home tend to slip between the cracks. These projects represent a major opportunity to capture energy savings and could be a growth avenue for both utilities and HERS Raters. This session will describe the first 6 months of a cutting-edge program in Massachusetts that aims to light the way for the nation to capture this huge market opportunity. It will include an overview, lessons learned, steps to get involved, and a pattern for other regions to successfully implement similar programs.

NEW ROOFING TECHNOLOGY – ELIMINATE CONDENSATION IN OPTIMIZED HVAC DESIGNS WITH RADIANT BARRIERS AND BURIED DUCTS IN HIGH PERFORMING ATTICS*

PRESENTER: *Achilles Karagiozis, Owens Corning*

ROOM: *Gallier AB*

New way of creating a highly insulated attic has been devised. This proposed method deploys a fundamental principle of the new performance attributes of unvented attics with a vapor diffusion port at the ridge of the attic. First of all, the attics are sealed, creating no intentional ventilation with the exterior. This is particularly of value in hot and humid or mixed climate zones where period of the year exists with rather high exterior relative humidities. Making the attics unvented reduces the moisture load during this period and allows the attics to become the driest possible. The sun essentially does all the work resulting in a very dry attic. However, as all the insulation is placed on the bottom of the attic and not touching the exterior sheathing of the attic, there is a risk for vapor from the interior of the building to diffuse to the sheathing. This is particularly important during the cold period season where the absolute water content of the interior is higher than the exterior. Also, the outside temperature of the sheathing board is lower than the dew point resulting in possible condensation and localized moisture accumulation. If this persists, the high moisture contents will cause moisture induced damage.

To combat this issue an innovative approach borrowed by Dr. Lstiburek is deployed. A diffusion port (always vapor diffusion but not air flow passage) along the ridge is used to allow vapor to escape from the attic and dry the roof in the cold periods of the year. This vapor diffusion port is a water vapor pressure release valve that creates passive drying from the interior to the exterior of attic.

The presenters will describe the deployment of this innovative approach to create great performing attics (R-50 to R-70) burying the air tight ducts with an air tight attic floor lid. A combined theoretical analysis with modeling data will be presented along with the measurements of 4 real building attics located in Southern hot and humid USA.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

1:30 PM – 3:00 PM

THE HERS VALUE AND POTENTIAL LIABILITY IN THE APPRAISAL PROCESS

PRESENTERS: *Stephen S. Wagner, MAI, SRA, AI-GRS, Appraisal Institute; Sandra K. Adomatis, SRA, LEED Green Associate, Adomatis Appraisal Service*

ROOM: *Oak Alley*

The HERS Rating is a valuable data point in the appraisal process. The energy rating and estimated savings are units of comparison that valuation professionals are beginning to understand and implement into their work product. The secondary mortgage market acknowledges the HERS Rating, along with a few other energy ratings. This session will focus on the importance of the HERS Rating, RESNET Appraiser Dashboard and rater liabilities attached to both professions. You can't afford to miss this powerful session that will give you valuable insight and tips for your clients.

TOP 10 QA FINDINGS COUNTDOWN

PRESENTERS: *Chris McTaggart, Building Efficiency Resources & Glenn Pease, EnergyLogic*

ROOM: *Nottoway*

Quality assurance is critical to the success of RESNET and the HERS industry. RESNET requires QA Providers to perform both field and file QA on an ongoing basis. However, QA goes beyond simply reviewing files and showing up at a few houses, and it should start with education and mentorship to prevent issues from being found during the QA review by ensuring raters get the right answer the first time. With this in mind, please join experienced Quality Assurance Designees from some of the largest RESNET QA Providers in the industry to discuss our experience with the Top 10 QA findings that we observe on an ongoing basis. Our goal with this session is to educate Raters on these issues so as to foster greater understanding and accuracy.

ENHANCING THE CONSISTENCY OF THE CALCULATION OF HERS INDEX SCORES

— THE RESNET SOFTWARE CONSISTENCY COMMITTEE

PRESENTERS: *Neal Kruis, Big Ladder Software & Committee Panel*

ROOM: *Grand Couteau*

A key to ensuring the quality of HERS Ratings is to enhance the consistency which the various accredited HERS software programs calculate HERS Index Scores. Too often in the past, the same home could receive a different score based upon the software program being used. For the past four years, the RESNET Board has strived to enhance the consistency of the calculation of HERS Index Scores.

A big step has been achieved with the formation of the RESNET Software Consistency Committee. The Committee is formed as part of a mechanism by which RESNET can improve the consistency of HERS Index Scores and modeled energy consumption (based on the RESNET/ICC/ANSI Standard 301) among RESNET, accredited HERS Rating Software Tools, and enhance accreditation testing parameters. This is intended to be a continuous, ongoing process aimed at improving consistency.

To guide the efforts of the committee, RESNET will be retaining the Services of an Energy Modeling Director. The RESNET Energy Modeling Director will act as the arbitrator of the Software Consistency Committee, making technical decisions about modeling tests, requirements, and guidelines with the support of other members of the committee. The position will also be the liaison between the SCC and RESNET staff.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

1:30 PM – 3:00 PM

NEW BUSINESS OPPORTUNITIES FOR HERS RATERS – RESNET POSITIONING HERS RATERS AS THE GO TO RESOURCE FOR ENERGY CODE COMPLIANCE VERIFICATION

PRESENTERS: *Ryan Meres, RESNET; Mark Johnson & Michelle Britt, IECC*

ROOM: *Grand Chenier*

In addition to verification of compliance to the International Energy Conservation Code (IECC) Energy Rating Index option, verifying compliance to the other compliance options of the IECC represents a great opportunity for HERS Raters to expand their business portfolios. The performance path is increasingly used by builders to demonstrate compliance to the energy code. Since the 2012 the IECC's prescriptive path requires both air and duct leakage testing. It is natural that HERS Raters provide these verification services to builders.

RESNET is partnering with the International Code Council (ICC) to provide HERS Raters with the credentials to be able to demonstrate to building code officials their credibility. :

These efforts include:

- Special training and testing for ICC certification as energy code verification at the RESNET Conference
- Development of a digital ICC/RESNET credential badge for HERS Raters who have been certified by ICC for energy code verification that can be presented to building code officials.
- A special online ICC training and certificate for HERS Raters to demonstrate their proficiency with the IECC performance compliance path.
- A uniform ICC/RESNET IECC performance compliance verification report that HERS Raters can produce with their HERS Software.

This session will explain these new benefits and explore their opportunities for HERS Raters.

TOUR OF ZERO

FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTERS: *Sam Rashkin, US DOE and Panel: Geoff Ferrell, Mandalay Homes; Luis Imery, Imery Group & Gene Myers, Thrive Home Builders*

ROOM: *Bayside A*

Did you know there are over 12,000 zero energy and zero energy ready homes constructed? Did you know that zero net energy construction increased 75% from 2016 to 2017? Did you know that 44% of builders have already built or plan to build a net zero, near net zero, or zero energy ready home by 2019? Yes all the data points to a 'zero' movement. Increasingly raters will be required to add 'zero' verification to their services to meet this growing demand. So it's time for a 'Tour of Zero'. This session will include a review of the six building blocks for 'zero' that create a powerful and bankable value proposition for American homebuyers: a superior living experience. Then the tour begins. Winners of the 2018 Housing Innovation Awards will guide you through their latest Zero Energy Ready Homes across widely varying locations and climate zones. Each tour stop will highlight beautiful designs, superior experiences, outstanding performance, and impressive business results. Finally, the tour will end with a list of the builders raters should be contacting now to upserve with Zero Energy Ready Home certification so they can deliver a superior homeowner experience and be distinguished as industry leaders.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

1:30 PM – 3:00 PM

KB HOME PROJEKT – TOMORROW'S HOUSING TODAY

PRESENTER: *Jacob Attala, KB Homes*

ROOM: *Bayside B*

Home builders share a responsibility to make smarter, more energy and water efficient, and healthier homes a larger part of their standard portfolio to buyers who are not going to wait for builders to develop and install the features and functionality they expect to be in their homes.

The BUILDER KB Home Projekt, Where Tomorrow Lives, focuses on an ambitious goal, for eventual home buyers and for architects, engineers, and builders whose business is to serve them: To break new ground in home building; transforming design, building partnerships, construction processes, and, ultimately, a household's experience in a home and community, bring the future to today for everyday buyers of new houses in new neighborhoods.

This home is being built in Las Vegas and will be open for tours at the Consumer Electronics Show in January and again in February.

The project stretches conventional architecture, engineering, and construction practices in three game-changing ways, each focused on setting a new bar on value, excitement, and attainability for net zero energy homes with best-of-breed water conservation levels.

The audience will learn about the following aspects of the home:

- Collaboration. Expanded and inclusive ecosystem of stakeholder partners—manufacturers, community and utility enterprise associates, technology developers, planners, designers, educators, and marketing experts--each of them invested in and committed to showing both home buyers what they can and should expect of their new home builders and community developers, and home builders how to meet and exceed those expectations, will serve as a "how to collaborate" R&D model for other builders as they take on designing homes that will meet tomorrow's sustainability codes and standards.
- Net zero energy.
- Water conservation.

ANSI/RESNET/ICC STANDARD 301-2019: WHAT HAS CHANGED SINCE 2014 & HOW IT ADDRESSES MULTIFAMILY

PRESENTER: *Gayathri Vijayakumar, Steven Winter Associates*

ROOM: *Bayside C*

ANSI/RESNET/ICC 301-2014 is the Standard that governs how an Energy Rating Index is calculated. Every few years, ANSI standards are updated to integrate approved changes and additional revisions into a new edition. By the time of the conference, RESNET will have approved the 2019 edition of Standard ANSI/RESNET/ICC 301-2014. The 2019 edition has integrated addenda and interpretations from ANSI/RESNET/ICC 301-2014 that have been approved over the past 5 years. In addition, as multifamily construction is one of the fastest growing segments of the housing industry, the 2019 edition incorporates many changes to better address multifamily buildings. The biggest change will be an expansion of scope that permits energy ratings to be conducted on any dwelling or sleeping unit, regardless of building height. Come learn about the specific changes, how they may impact your ratings, and when the requirements in the Standard will start to impact your energy ratings.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

1:30 PM – 3:00 PM

BUILDING PERFORMANCE AS A NATIONAL POLICY INITIATIVE IS BACK ON THE TABLE – THE RESULTS OF THE 2018 CONGRESSIONAL ELECTION AND WHAT IT MEANS FOR THE BUILDING PERFORMANCE INDUSTRY

PRESENTERS: *Carl Chidlow, Winning Strategies Washington & David Goldstein, NRDC*

ROOM: *Southdown*

The 2018 US Congressional Election profoundly altered Congress' complexion with the Democrats taking control of the House and the Republican increasing their majority in the Senate. There have already been calls for action on clean energy and building efficiency by both Democrats and Republicans in the House and Senate. This session will present the results of the 2018 election, introduce the new key faces in Congress and explore the implications for building energy efficiency. The session will also explore how the building performance industry can make its voice heard in the new Congress and the new tools that RESNET is developing to aid this.

RESNET ELC INTRODUCES NEW RECRUITMENT TOOLKIT

PRESENTERS: *Valerie Briggs, RESNET & Matt Gingrich, Energy Diagnostics, RESNET President, ELC Chair*

ROOM: *Gallier AB*

The RESNET Emerging Leadership Council (ELC) is committed to recruiting the next generation of leaders for the rating industry. And that recruitment can start at the local level. The ELC has developed a free recruitment resource toolkit for rating providers to promote energy rating careers on a local level. While the home building industry labor shortage is a global issue, we can act locally to increase the inclusion of energy raters among possible career choices. Attend this session to see the contents of the toolkit and hear suggestions, talking points and examples of how to recruit new raters at the local level.

3:30 PM – 5:00 PM

RESNET BOARD TOWNHALL MEETING – OPPORTUNITY TO HAVE A DIALOGUE WITH YOUR RESNET BOARD REPRESENTATIVES

PANELISTS: *RESNET Board of Directors*

ROOM: *Oak Alley*

A special feature of the 2019 RESNET Building Performance Conference with a townhall meeting with the RESNET Board of Directors. This session will allow the RESNET network to interact with the members of the Board.

Issues that will be addressed include:

- What is the role of the RESNET Board?
- What is the direction that the RESNET Board will like RESNET to head over the next five years?
- What are RESNET priorities for 2019
- Open question and answer session

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

3:30 PM – 5:00 PM

WATER EFFICIENCY INNOVATIONS: HOW TO GET CREDIT IN THE WATER RATING INDEX AND HERSH2O? *

PRESENTERS: *John Bell, Greyter Water Systems & Ryan Meres, RESNET*

ROOM: *Nottoway*

The first preliminary draft standard (standard) of the Water Rating Index (candidate-BSR/RESNET/ICC 1101-201x) went out for public comment on August 3, 2018. Section 6.2 of the standard allows for water rating providers to petition for adjustment to the Water Rating Index for a rated home with features or technologies not addressed by approved software rating tools or the standard. Come to this session to learn about the types of systems and technologies covered by the standard and the process for petitioning for an adjustment when a system or technology is not covered.

IAQ, VENTILATION AND AIRTIGHTNESS in High Performance New and Existing Homes

PRESENTERS: *Brett Singer & Iain Walker, Lawrence Berkeley National Lab*

ROOM: *Grand Couteau*

Stringent ventilation and airtightness requirements are becoming commonplace in the high performance homes industry, and green building rating systems are starting to encourage and sometimes require aggressive IAQ provisions, including use of low-emitting materials, chemical avoidance, and enhanced air filtration. But do these challenging requirements result in better indoor air quality for home occupants? In this session, learn how air pollutants found in these homes compare with health-relevant guidelines and what factors contribute to IAQ in high performance homes, such as kitchen exhaust fans, commissioning and source control. How important is, occupant education, cooking, or commissioning? This session will answer these questions by presenting summaries of field studies including results from recent field studies of air pollutant levels in high performance homes.

NAVIGATING THE RAPIDS: STEERING NEW HOMES PROGRAMS THROUGH ENERGY CODE CHANGES

PRESENTERS: *Kathy Greely, Performance Systems Development; Mike Turns, Performance Systems Development;*

Ben Adams, MaGrann & Dan Wildenhaus of TRC

ROOM: *Grand Chenier*

Energy code changes can pose major challenges for new construction programs, but if navigated correctly, can be a land of new opportunities. Come learn about the challenges of diminishing savings, the necessary course corrections to eligibility criteria, and the importance of how, where, & when to set the baseline. Real-world experience from Pennsylvania (moving to 2015 IECC this fall) will be shared. Presenters will also discuss how the mandatory diagnostic testing associated with more recent codes can represent a hidden treasure that can lure new builders into program participation.

RATERS, REALTORS, AND REFERRALS

PRESNETER: *Todd Gamboa, Building Trust LLC*

ROOM: *Bayside A*

HERS Raters, third party inspectors, and consultants are frequently seen as an extra (and sometimes unnecessary) expense in the homebuilding industry. Often, energy professionals rely on utility incentives, government rebates, and code mandates to show value in their services. So how can you build your business without them? By building your network!!! Real estate professionals are still largely under-educated in all markets of the country. They are engaged in 9 or 10 residential property transactions, yet very few understand the importance of energy efficiency and building science. Increase your client base, improve your revenue, and build your brand by creating and leveraging your Realtor relationships.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

3:30 PM – 5:00 PM

WHAT YOU DON'T KNOW YOU DON'T KNOW ABOUT (HOT) WATER

PRESENTER: *Gary Klein, Gary Klein and Associates, Inc*

ROOM: *Bayside B*

Once we build a very high-performance building from the perspective of heating, cooling and ventilation and install high efficiency lighting and plug loads, we are left with what to do about hot water. Hot water is a system: heater, distribution piping, plumbing fixtures and appliances, waste heat that runs down the drain. Overlay occupant behavior and then change technologies from what we are used to. To top it off, the way most of us were taught to design hot water systems is based on information that is more than 20 years out of date. This session will present practical measures you can incorporate into your next project that result in high performance hot water systems and very satisfied customers.

Presentation Objectives:

- Identify at least 5 things you didn't know you didn't know about hot water
- Understand the value of pressure compensating aerators.
- Verify that the amount of water, energy and time it takes for hot water to arrive at a fixture is significantly larger than the volume that is in the pipe.
- Compare the pressure drop through modern fittings with the values in our engineering tables.

2019 CROSS BORDER BUILDER CHALLENGE LOWEST HERS SCORE AWARDS PRESENTATION

PRESENTERS: *Rod Buchalter, RenewABILITY Energy Inc. & John Godden, Canadian Residential Energy*

ROOM: *Bayside C*

Join us for the 2019 award presentation for the lowest HERS scores for production and custom builders, along with net zero awards for both the U.S. and Canada. Awards will be presented by John Godden of the Canadian Residential Energy Services. Additionally, there will be honorable mentions from this year's competition plus the presentation of the Enbridge Innovation Award open to all builders both sides of the border.

GROWING THE NUMBER OF NEW HERS-RATED HOMES ACROSS AMERICA:

RESNET'S 2019 MARKETING PLAN

PRESENTERS: *Valerie Briggs, RESNET & Natalie Good, 4D*

ROOM: *Southdown*

The RESNET Board of Directors has set a goal to increase the number of new homes' building performance to be verified by HERS Raters. To achieve this goal RESNET is undertaking a comprehensive marketing campaign aimed at consumers, builders, code officials and real estate professionals.

The campaign will have the following elements:

- Research & Analytics
- Audience Targeting & Resource Allocation
- Communication Channels
- Develop Messaging
- Delivery of Campaign
- Evaluation of Results

This session will present the marketing plan and methods used to create awareness and boost demand.

BREAKOUT SESSIONS

(CONTINUED)

MONDAY,
FEBRUARY 25

3:30 PM – 5:00 PM

5 AIR SEALING PRIORITIES IN NEW HOME CONSTRUCTION

PRESENTER: *Charlie Haack, Builder/Insulation Contractor*

ROOM: *Gallier AB*

Insulation alone isn't designed to stop air flow. While insulation does reduce air movement through wall cavities to some extent, its purpose is to control the flow of heat, not air. Reducing air leaks through a building's envelope is critical to ensuring energy efficiency, durability and occupant comfort, but with nearly one mile of exterior joints that can leak air in the typical new home, what are the air sealing priority areas and how do you effectively address them? This session will reveal five priority air sealing locations in new homes and review how effectively addressing these areas can contribute to important air-leakage reductions.

TUESDAY,
FEBRUARY 26

8:30 AM – 10:00 AM

GROW YOUR RATING CAREER WITH ADDITIONAL CERTIFICATIONS

PRESENTERS: *Nick Hurst, EPA Indoor airPLUS; Olga Cano, EPA Water Sense; Sam Rashkin, DOE Zero Energy Ready Home; Asa Foss, US Green Building Council LEED for HOMES; Michelle Foster, NGBS Green & Scott Haugen, Environments for Living*

ROOM: *Oak Alley*

You know how to perform a HERS Rating-now learn how you can leverage the skills and techniques associated with a HERS rating into additional business and added value for your builder partners.

Come hear representatives from the following organizations provide a brief background about their certification or label, learn what is required to get certified, and what added value these programs can provide to your business and your builder partners.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

8:30 AM – 10:00 AM

CHOOSING SUSTAINABLE MATERIALS: SCIENCE FOR SAVING ENERGY, WATER THE ENVIRONMENT AND HUMANITY

PRESENTER: *Rick Blumenthal, Knauf Insulation*

ROOM: *Nottoway*

Demonstrating the relationship between sustainable materials and practices and utilizing ecobuild construction is now just coming into favor among architects, engineers and builders. What is the nexus between sustainable materials and energy, water, health, durability, environment and value? Sustainable materials are more energy efficient, save water, they are healthier for trades and the occupants, have a lower carbon footprint, use less fossil fuel, and provide greater value than less sustainable products. However, is it only the material itself that makes one sustainable product better than another? The discussion will focus on how to select the right material, describe the differences in material and product labeling that define sustainable attributes and demonstrate environmental, natural resource, energy, water and other associated savings. Examples of sustainable materials and manufacturing practices will be discussed as well as presenting resources that support decision making when evaluating cost, value and transparency. If sustainable materials and practices are known to be a positive factor in energy savings, it stands to reason that incorporating sustainable practices would likely lower HERS scores. If in fact, that is the case, should RESNET consider ways to incorporate sustainable attributes into ratings? Something to consider.

OH NO! INCONSISTENCY IN CALCULATING RESNET/ICC ANSI STANDARD 301 AND 2018 INTERNATIONAL CONSERVATION CODE SECTION 406 COMPLIANCE SCORES *

PRESENTER: *Philip Fairey, FSEC*

ROOM: *Grand Couteau*

In the International Energy Conservation Code (IECC) the International Code Council (ICC) recognized the RESNET/ICC ANSI Standard 301 for calculating Energy Rating Index (ERI) scores for compliance to Section 406 of the code. At the same time the ICC modified the 2018 IECC Section 406 to require a difference reference home ventilation rate calculation. This means there will be a difference between ERI scores and Section 406 compliance scores. How big a difference will this inconsistency cause? In a study commissioned by RESNET the Florida Solar Energy Center has calculated that Section 406 will raise scores ranging from 2 to 9 points depending on the climate session.

This session will present the results of the Florida Solar Energy Center.

TO NOTCHES UNKNOWN – A GOAL 90% OF ALL NEW HOMES RATED BY HERS RATERS –

WHAT WOULD IT TAKE?

PRESENTERS: *Greg Cobb, Energy Inspectors & Dave Bell, Top Build Home Services*

ROOM: *Grand Chenier*

Currently around a quarter of new homes built annually in the U.S. are HERS rated. The RESNET Board of Directors has set a goal of having half of all new homes HERS rated annually. RESNET staff is embarking on a marketing plan to achieve that goal. But, what would it take to achieve the boldest goal – having 90% of new homes inspected, tested and labeled by HERS Raters? This session will explore if this goal is possible, and if so, what it would take to achieve such a goal.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

8:30 AM – 10:00 AM

NOW AVAILABLE! THE ENERGY STAR MULTIFAMILY NEW CONSTRUCTION PROGRAM FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTERS: *Rebecca Hudson, EPA & Gayathri Vijayakumar, Steven Winter Associates*

ROOM: *Bayside A*

Until now, multifamily new construction projects have only been able to get certified through either the ENERGY STAR Certified Homes program or the ENERGY STAR Multifamily High Rise (MFHR) program. EPA recently launched the ENERGY STAR Multifamily New Construction program, which is now available to multifamily projects of all sizes, including townhouses, garden style apartments, and mid/high-rise apartment buildings. While early adopters may choose to enter this new program now, to allow for a period of transition, multifamily projects with building permit dates prior to January 1, 2021, can continue to seek certification through the Certified Homes and MFHR program. Join this session to learn more about how the new program compares to Certified Homes and MFHR and what you need to know to start certifying units to meet the new requirements.

TAPPING THE REAL ESTATE MARKET FOR ENERGY PERFORMANCE – THE RESNET - PEARL NATIONAL HOME CERTIFICATION COLLABORATION

PRESENTERS: *Robin LeBaron, Pearl National Home Certification & Steve Baden, RESNET*

ROOM: *Bayside B*

Pearl's certification system enables home buyers to see and understand the value of a home's high-performing assets of an existing home when the home is sold. The Pearl Certification targets retrofits and existing homes. An appraiser authored study on Pearl Certified homes showed a 5% premium when the homes were marketed correctly. Pearl is the only private certification firm to sponsor the U.S. Department of Energy's prestigious Home Performance with ENERGY STAR program. Pearl is a National Association of Realtors (NAR) REach Accelerator company.

RESNET and Pearl are cooperating in a collaborative fashion to mitigate potential confusion among consumers and the real estate and appraisal communities. The collaboration efforts are aimed at explaining that two systems are complementary and not competitive and develop a synthesis. This effort will avoid confusion in the market place and can lead to greater HERS presence in the existing homes.

A CASE STUDY OF A HERS RATED ACTIVE SENIOR COMMUNITY – ST. GEORGE, UTAH'S SUNRIVER DEVELOPMENT

PRESENTER: *Kelly Stephens, SunRiver Development*

ROOM: *Bayside C*

With the aging of Baby Boomers there is a growing housing market trend of retirees downsizing their homes and moving to active senior communities. Since these homebuyers are on fixed incomes utility bills and comfort are critical issues. The SunRiver Development in St. George in southern Utah is such a development.

St. George, Utah based SunRiver St. George has a different twist, however. All of the more than 2,000 homes in the development are HERS rated having HERS Index Scores in the mid 60s. The homes are also water efficient.

SunRiver St. George is an award-winning master-planned active retirement community developer/builder that has set the standard for active adult retirement living. The active retirees that buy the builder's homes are on fixed incomes, so it is essential that the homes are energy and water efficient. In 2011 the builder was named the Builder of the Year by the Southern Utah Home Builders Association

This session will feature why the development made the HERS energy performance commitment and the reaction the market had.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

8:30 AM – 10:00 AM

QUALITY ASSURANCE DATA FILES MADE EASY

PRESENTERS: *Ben Graham, EnergyLogic Inc. & Chris McTaggart, Building Efficiency Resources*

ROOM: *Southdown*

The Standards say you need a Quality Assurance Data File, but a Quality Assurance Data File has a vague definition and little guidance exists on what one should look like. This session will discuss the intent of a rating data file, from field verification for your builder client to their crucial role in the Quality Assurance review process. We will also discuss strategies for streamlining your data collection to reduce busy work while maintaining transparency and increasing accuracy.

SELLING & MARKETING: A HOW-TO BY & FOR BUILDERS

EEBA TRACK

PRESENTER: *Gene Myers, Thrive Home Builders & PANEL*

ROOM: *Gallier AB*

For many years EEBA has been a source for building science training and education. Thanks to building science pioneers, investment from the US Department of Energy and the US Environmental Protection Agency we now have the technology to build high-performance homes. The remaining “last mile” on the journey of bringing high-performance homes to mainstream home buyers is how to identify buyers, effectively communicate the value proposition of high-performance homes and closing the sale. Over the years great work has been done by DOE and EPA and their consultants to help builders deal with this challenge. Now builders have developed a track record with what works and what doesn't. Learn from people on the front lines with customers.

10:30 AM – 12:00 PM

RESNET RATER INSTRUCTOR ROUNDTABLE

PRESENTERS: *Scott Doyle & Billy Giblin, RESNET*

ROOM: *Oak Alley*

This session aimed at Rater Instructors, and RESNET Accredited Training Providers will first provide an overview of recent standard changes with a focus on how these changes affect curriculum and testing. Last year's Instructor Roundtable session included specific feedback for instructors from RESNET Staff's Quality Assurance Oversight of HERS Providers. This year we have even more to share as RESNET Staff began in-field Quality Assurance Monitoring starting in Spring of 2018. By sharing some of the big takeaways, we aim to strengthen the feedback loop that connects QA findings back to training and instruction, with the goal of continuous improvement towards consistency.

THE SHAPE OF THINGS TO COME – MANUFACTURED COMPONENT HOME BUILDING AND POTENTIAL EFFECTS ON THE HERS INDUSTRY

PRESENTERS: *Clint Shireman, Knauf Insulation; Greg Cobb, Energy Inspectors & CR Herro, Meritage Homes*

ROOM: *Nottoway*

Due to the challenges of labor and product prices there is a possibility of a major disruption in the home building and HERS Rating industries. The shortage of carpenters, framers, roofers and other home building trades and the increases in lumber prices presents challenges to the traditional stick-built housing model. This session will explore the potential of this disruption and possible effects on the housing and the rating industries through the perspectives of a product supplier, high volume HERS Rating firm and a national production builder.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

10:30 AM – 12:00 PM

2021 IECC: POTENTIAL CHANGES TO THE ENERGY CODE THAT CAN IMPACT RESIDENTIAL BUILDINGS

PRESENTER: *Eric Makela, New Buildings Institute*

ROOM: *Grand Couteau*

The 2021 ICC International Energy Conservation Code Development Cycle will start in 2019 and it is anticipated that several hundred proposals will be submitted that will impact the residential and commercial provisions of the energy code. Changes to the residential provisions could have a positive or negative impact on the ERI approach, envelope air leakage requirements, or other efficiency provisions that could impact the RESNET membership. This session will provide an overview of the proposed changes to the provisions of the IECC that will have a large impact on residential energy efficiency and that could have an impact on RESNET. This session will also provide a brief overview of the code development process and how RESNET members can get involved to support or oppose changes to the IECC.

EARNING HERS POINTS FOR QUALITY HVAC DESIGN & INSTALLATION

FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTER: *Dean Gamble, EPA & Michael Brown, ICF*

ROOM: *Grand Chenier*

With current HERS ratings, one of the largest influences of a home's energy performance—the HVAC system—is still rated based on nameplate information, and not impacted by how the system was designed and installed. RESNET and EPA have drafted a new standard to change this by rewarding high-quality HVAC design and installation with HERS points. Not only will this make proper design and installation more valuable than ever before, it will significantly re-unify the process of doing a HERS rating and earning the ENERGY STAR. Attend this session to learn the key concepts behind the new standard, how it may impact the HERS index, and when it will likely be available for use.

HOW TO UPSERVE YOUR HIGH-PERFORMANCE BUILDERS

FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTERS: *Sam Bowles, Newport Partners & Chrissi Antonopoulous, PNNL*

ROOM: *Bayside A*

We're talking about upserving, not upselling. There's a big difference! Upselling is just getting clients to buy more without regard for value. Upserving is providing additional services that will make your clients more successful.

The DOE Zero Energy Ready Home program has a suite of builder-tested solutions that give ZERH builders special recognition, credibility, and relevance to home buyers. Raters leverage these tools to help builders convey the benefits of their superior consumer experience and use DOE's voice of authority to cut through the greenwashing of competitors. This session will present an impressive array of free resources from the DOE Zero Energy Ready Home program, along with builder insights on how they use these tools. Take advantage of this opportunity for raters to enhance their value to builders and create more opportunities for themselves.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

10:30 AM – 12:00 PM

FROM LISTING TO CLOSING: THE ROLE OF HERS IN THE REAL ESTATE TRANSACTION PROCESS

PRESENTERS: *Ryan Meres, RESNET & Sandra Adomatis, Adomatis Appraisal Service*

ROOM: *Bayside B*

This session will walk attendees through the real estate transaction process from listing to closing and illustrate the key steps impacted by the HERS Index Score. Attendees will also hear about what RESNET is doing to drive HERS Index scores into the real estate transaction, including the newly launched API for MLS data aggregators and the Appraiser Portal. Builders, raters and real estate professionals will walk away from this session with a clear understanding of how the HERS Index fits into the real estate transaction and how they can work in their local market to drive change.

A NATIONAL RETROFIT CHALLENGE TO MEET THE PARIS GOAL OF 1.5 DEGREES *

PRESENTER: *David Goldstein, NRDC*

ROOM: *Bayside C*

The United States is one of 190 nations that is committed to pursuing efforts to limit temperature increase to 1.5 degrees C above pre-industrial levels. Even back-of-the-envelope analysis shows that this goal will be impossible to achieve without deep retrofits of almost all buildings. This session will explore how this might be accomplished, exploring several options, given that such a program has never been undertaken at this scale before and inherently requires multiple and simultaneous plans and actions by a wide range of stakeholders.

There is a need to take a "whole building" approach to retrofits rather than more common approaches today which emphasize specific widgets or systems. It also emphasizes the need for new methods of approaching building valuation since energy cost savings alone often will not cover the entire cost of renovations. We consider the need for technical innovation in building construction methods and for electric technologies for supplying heat and hot water to buildings. Finally, we consider the impact of deep retrofits on all buildings to the electricity grid as well as the natural gas system.

This session will explore pathways to accomplish this goal with the minimal practical cost disruption and transfer payments from program administrators to property owners. The scale of this endeavor- very roughly \$3-\$4 trillion- would strain the budgets of current and prospective administrators. The session will introduce a set of paths that, if rapidly implemented, could set us on a practical rather than political approach to meeting the Paris accord.

HOW LOW CAN WE GO? HOW CLOSE CAN WE GET?

PRESENTER: *Gary Klein, Gary Klein and Associates, Inc.*

ROOM: *Southdown*

From the point of view of the hot water distribution system, there are really only two floor plans: those in which there is a compact relationship between the wet rooms and the source of hot water and those which aren't compact. Compactness has several potential benefits: improved health and safety, increased efficiency of water, energy and time, reduced cost of construction and reduced cost of operations and maintenance. This session will explore the practical limits of compact design and the implications for the plumbing industry. We will also estimate the potential benefits of putting all of the best practices that work well together into the same occupancy.

Presentation Objectives:

- Understand the relationship between the logical worst-case and logical best-case floor plans.
- Distinguish between wet rooms and dry rooms.
- Describe how compact floor plans for wet rooms improve the water, energy and time efficiency of hot water systems
- Understand why compact floor plans for wet rooms improve the health and safety of plumbing systems

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

10:30 AM – 12:00 PM

SCALING UP HIGH PERFORMANCE BUILDING

EEBA TRACK

PRESENTER: *Gene Myers, CEO of Thrive Home Builders*

ROOM: *Gallier AB*

Many high-performance builders start small and aspire to grow. Hear from Gene Myers, CEO of Thrive Home Builders in Denver, Colorado about how Thrive recovered from the depths of the Great Recession when they closed less than 40 homes to their current volume of 250 homes per year. The subtitle of “winning the hearts and minds of your people, your trade partners and your customers” says it all.

Learning Objectives:

1. Learn how Thrive developed its unique culture through Open Book Management and Thrive's One Page Business Plan.
2. Learn how Thrive obtained buy-in from its trade partners through its Lean Building Blitz and Vendor Council.
3. Learn how Thrive connects with its homebuyers through the three legs of its brand; Efficient, Healthy and Local, and how Thrive sells its homes.

1:30 PM – 3:00 PM

CALIFORNIA DREAMIN' *

PATH TO NET ZERO ENERGY HOMES – CALIFORNIA ZERO-NET-ELECTRICITY NEW HOMES ENERGY CODE

PRESENTER: *David Goldstein, NRDC*

ROOM: *Oak Alley*

The California Energy Commission updated its building energy code to increase energy efficiency, clear the way for clean energy heating and hot water, and, for the first time, require new homes to install rooftop solar panels. The standards, effective in January 2020, will be a big step forward for energy savings and reducing the carbon footprint of California's homes and buildings—the second-largest source of greenhouse gas emissions in the state. Under the new code, new buildings will be efficient enough that their electricity use can be offset by a modest number of solar panels. Consequently, for the first time, building energy standards will take on another role: in 2020 they will require that rooftop solar panels be installed on new single-family homes and low-rise multi-family buildings to offset the home's expected annual electricity use and achieve “zero-net electricity” status.

This session will explain the new code, why it was adopted and the implications for the rest of the nation.

HOW TO USE CONSUMER IAQ MONITORS TO CREATE A HEALTHIER HOME

PRESENTERS: *Iain Walker & Brett Singer, Lawrence Berkeley National Laboratory*

ROOM: *Nottoway*

For less than \$200, you can buy an indoor quality monitor that measures temperature, relative humidity and particulate matter. And for just a bit more you can also get CO2 or VOCs. These devices can interface with smart home systems to activate filtration or ventilation controls. But are the monitors accurate and reliable enough? We will discuss key performance issues and summarize available information from testing done by Berkeley Lab and others. We also will present recommendations on how to select and use these monitors for effective IAQ control.

Learning objectives:

1. Understand the measurement principles used by research grade and low-cost monitors that measure airborne particles.
2. Recognize residential sources that emit particles that are not well detected by low-cost devices.
3. Become familiar with key performance parameters for low-cost IAQ monitors.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

1:30 PM – 3:00 PM

THE DATING GAME: ENERGY CODE STYLE

PRESENTERS: *Lauren Westmoreland, Southeast Energy Efficiency Alliance; Abe Kruger, SK Collaborative*

ROOM: *Grand Couteau*

Come see 3 HERS Rater Suitors compete for the business of a builder! In the past, this builder has been meeting, but not exceeding the statewide energy code. But a new statewide energy code is looming and this builder is wondering if the new ERI pathway is an option worth pursuing, especially since (s)he is constructing homes across multiple jurisdictions – and let's face it... not all building departments do things the same way. This builder is going to throw some tough questions and situations (based on real experiences) at the HERS Rater Suitors. Let's see if any of them can win the business!

WHAT'S IN STORE FOR THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) CYCLE

PRESENTERS: *Ryan Meres, RESNET; Bill Faye, Energy Efficient Codes Coalition; Joel Martell, Leading Builders of America & NAHB Representative*

ROOM: *Grand Chenier*

The IECC is updated every three years. The 2021 IECC code cycle began in January 2019 with the deadline for submitting proposals to amend the IECC. There have been a number of proposals submitted that will affect the Energy Rating Index and performance compliance paths. This session will showcase proposals submitted by RESNET, NAHB, the Energy Efficient Codes Coalition and the Leading Builders of America.

SELLING WATERSENSE

FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTER: *Beth Livingston, EPA*

ROOM: *Bayside A*

What is all this talk about water use in the homes and why reduce it? Learn how to talk about water, why water-efficiency is important, how to talk to builders and home owner/buyers about water-efficiency, and why it's important. We will describe the typical target audience for efficient homes, review the consumers mind-set, what resonates and motivates them to action with water. After this session, you will be able to confidently talk about the importance of saving water in new home construction.

NEW RESNET HERS INDEX MARKETING TOOL KIT FOR HERS RATERS

PRESENTER: *Valerie Briggs, RESNET*

ROOM: *Bayside B*

An important goal for RESNET is to assist HERS Raters in expanding the demand for HERS Ratings. RESNET is undertaking a major marketing campaign aimed at consumers, builders, code officials and real estate professionals to increase the understanding of the benefits of HERS Ratings. In addition, RESNET has developed a number of tools that HERS Raters and their builder clients can market the HERS Index.

These marketing tools include:

- A set of infographics that raters can post on their web site and use as handouts at home shows
- A set of videos that raters can post on their web sites and incorporate in their presentations to trade groups
- Free customizable Consumer HERS Index Brochures
- Free customizable HERS Index yard signs

This session will showcase these marketing tools and discuss strategies to apply them effectively

TUESDAY,
FEBRUARY 26

1:30 PM – 3:00 PM

LEVELING THE PLAYING FIELD ON RATING LARGE AND SMALL HOMES – RESNET HOME SIZE ADJUSTMENT FACTOR FOR HERS INDEX SCORES

PRESENTER: *Philip Fairey, FSEC*

ROOM: *Bayside C*

Previously, RESNET's standard resulted in a discrepancy in the calculation of HERS Index Scores between larger and smaller homes that have similar energy efficiency features. Larger homes received lower HERS Index Scores than smaller homes.

To address this discrepancy RESNET adopted a standard amendment, ANSI/RESNET/ICC 301-2014 Addendum E-2018, House Size Index Adjustment Factors (IAF). The standard amendment revises HERS Index Score calculations to address this issue. The amendment establishes a calculation methodology that compensates for size in order that similarly configured and equipped dwellings of different sizes will have equivalent ratings.

The Addendum went through several cycles of ANSI consensus standard development and public review before its adoption.

MOVING TOWARDS THE INTEGRATED HOME – CONNECTED, INTERACTIVE, INTEROPERABLE, & EFFICIENT

PRESENTERS: *Alice Rosenberg, Consortium for Energy Efficiency; Tim Carter, Georgia Power & Shon Richey, Alabama Power*

ROOM: *Southdown*

Program administrators are increasingly addressing grid balancing and consumer engagement among their portfolio objectives; overarching utility business model goals are evolving to focus more on comprehensive, integrated demand-side management (IDSM). Following a similar paradigm shift, new home programs in particular are looking beyond just the asset-based performance of a house to also consider the temporal and locational value of efficiency and non-energy benefits that can be enabled by two-way communication functionality. This concept of an integrated home is one that is both grid-interactive and efficient; connected technologies within the home have the potential to optimize energy management through individual products and systems that leverage interoperability and interactive effects.

The session will provide an overview of the changing landscape of new home programs and how the 'utility of the future' mindset is impacting the design and deployment of new construction efforts. Panelists will share how they are structuring offerings to achieve objectives beyond traditional energy efficiency, such as load management and behavior change.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

1:30 PM – 3:00 PM

FROM MODELED TO MOVE IN – THE CRITICAL RELATIONSHIP BETWEEN RATER AND BUILDER

EEBA TRACK

PRESENTERS: Geoff Ferrell, Madalay Homes; Justin Erickson, E3 Energy; Nathan Kahre, Thrive Home Builders; Steve Byers, Energy Logic; Anthony Maschmedt, Dwell Development; and Tadashi Shiga, Evergreen Certified LLC

ROOM: Gallier AB

The modern high-performance home requires more planning and proper execution than ever before. Most municipalities require some level of energy modeling and verification during the build process too. The relationship between energy rater and the builder has become an essential component to the build process in either scenario. Join us for a panel discussion between builders and their energy raters on how they collaborate, communicate, and support each other to take their homes from a building model to a customer's finished home and ensure that all the quality design features are constructed properly and effectively along the way.

Presentation Objectives:

1. Meet a few of the country's leading builders and their partner raters as they discuss the relationships from paper to final testing.
2. Join in the conversation to ask questions about how you can develop a great trade partner relationship.
3. Learn some key decision-making concepts that lead the process between an energy rater and their builder partner.

3:30 PM – 5:00 PM

RESNET QA TEAM'S OBSERVATIONS FROM THE FIELD (QAD ROUNDTABLE)

PRESENTERS: Scott Doyle & Billy Giblin, RESNET

ROOM: Oak Alley

Join Billy Giblin and Scott Doyle as they share observations and findings from their visits with QA Providers in 2018. They will share what they found as well as best practices. This session counts as the annually required QAD roundtable.

AIRFLOW 2019

PRESENTER: Bill Spohn, TruTech Tools, LTD

ROOM: Nottoway

Catch the wind in this comprehensive overview on ways to measure airflow. From basic to refined, see the products and processes, and learn a little about the research that goes into this important subject area. Attendees will get to handle air flow measuring products passed around the room. Learn the science behind airflow measurements and gain a better understanding of how to make a good measurement.

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

3:30 PM – 5:00 PM

LESSONS LEARNED FROM THE HERSH2O PILOT PHASE

PRESENTER: *Ryan Meres, RESNET*

ROOM: *Grand Couteau*

The RESNET Board approved the technical guidelines for HERSH2O in February, 2018. After rating a limited sample of test homes, a formal pilot phase was launched in June of 2018. During a six-month period, raters and builders have been testing the HERSH2O calculation spreadsheet, inspection checklist and inspection guidance document. Come to this session to learn how to use the calculation spreadsheet to obtain a HERSH2O rating and hear about the rating process from a builder and HERS rater that participated in the pilot. As RESNET prepares for a full launch of HERSH2O in 2019, this is a can't miss session for raters and builders that want to rate homes for water efficiency.

SAVE MORE, GET MORE: UTILITY SPONSORED PROGRAMS AND INCENTIVE DESIGN

PRESENTER: *Kevin Reza, ICF*

ROOM: *Grand Chenier*

Energy efficiency incentives and their outcomes don't always line up perfectly. Whether it's the misalignment of desired energy savings versus demand savings or difficulty balancing performance across different fuel-types, pay-for-performance incentive structures provide solutions that give utilities the ability to fine tune their program participants' behaviors.

Join this session for insight into effective pay-for-performance programs from the rater and utility-sponsor perspective.

WHAT I LEARNED ON THE WAY TO 'ZERO'

FEDERAL HIGH-PERFORMANCE HOUSING TRACK

PRESENTERS: *Sam Rashkin, U.S. DOE – Moderator & Rater Panel*

ROOM: *Bayside A*

Raters today are providing a growing list of services including code compliance and HERS ratings, certifications for ENERGY STAR and green programs, and energy consulting. Meanwhile, a select group of HERS raters are capturing a new opportunity to take builders to 'zero' with the U.S. Department of Energy Zero Energy Ready Home program. The big question is what have these leading raters learned that you have not? Why did they bother to learn the ropes and market the Zero Energy Ready Home program to builders? What technical, marketing, and verification lessons have these raters and their builder partners learned? What have been the most significant builder challenges and how have they addressed them? In this session you'll hear from a cross section of raters from different markets about the business case for zero, how they have successfully integrated it into their services, and how it will impact them in the future.

THE EVOLUTION OF ENERGY CODES

PRESENTER: *Mike Barcik, Southface Energy Institute & Lauren Westmoreland, Southeastern Energy Efficiency Alliance*

ROOM: *Bayside B*

By dating back to the early Model Energy Codes of the 1990's and settling on the benchmark 2006 IECC, then examining the widely adopted 2009 IECC to the landmark 2015 version and beyond, this session explores how the energy codes of old shaped where we are today and also where we are going. Join Mike and Lauren for an insightful look into the evolution of residential energy codes. See how game-changing technologies (such as low-e windows and blower door and duct testing) advanced through adoption and inclusion in the latest energy codes. Learn from the past (the origins of energy codes) to understand the present (our most recent codes) and grasp a sense of where future codes will lead us.

Lauren adds, "Reviewing energy codes also helps to shape where we'd like to go and how we might get there."

Come join us as this session will wrap with Energy Code Trivia - Win prizes!

BREAKOUT SESSIONS

(CONTINUED)

TUESDAY,
FEBRUARY 26

3:30 PM – 5:00 PM

MIDWEST TRENDS: USING BIG (HERS) DATA TO UNDERSTAND RESIDENTIAL CONSTRUCTION

PRESENTER: *Ian Blanding, MEEA*

ROOM: *Bayside C*

HERS Ratings are big business in parts of the Midwest and in some states comprise over 60% of all newly constructed homes per year. From 2014-2016, over 23% of newly constructed single-family homes received a HERS Index rating in the 13 state Midwest region. In this session, the Midwest Energy Efficiency Alliance (MEEA) will present findings based on an analysis of all RESNET Certified single-family HERS rated homes in key parts of the Midwest during this three-year period. This dataset of more than 79,000 homes not only includes the HERS Index score, but also the essential field verified home components (minimum rated features) that impact energy use and produce a HERS score. MEEA will utilize this HERS data to provide an overview of construction trends in the Midwest. This analysis will identify key metros for HERS Ratings and what motivating factors may exist, understand the similarities and differences between construction practices from state to state, and explore how home construction with respect to energy features may have changed over the three-year timeframe.

CONNECTING ENERGY EFFICIENCY, DURABILITY, SUSTAINABILITY AND RESILIENCE TO DESIGN BUILDING ENVELOPES

PRESENTER: *Dr. Theresa Weston, DuPont Performance Building Solutions & Amy Schmidt, Dow Building Solutions*

ROOM: *Southdown*

Global climate change has caused increased threat to the built environment by means of flood, tornado, wild fire, extreme temperatures, and increased wind driven rain. Building science solutions to manage the increased threats have a foundation in previous solutions for energy efficiency, durability and sustainability. As new building technologies and innovations are incorporated into the building envelope traditional construction practices need to be adapted. However, as these adaptations of construction practices take place, they still need to maintain adherence to basic principles of water management to prevent moisture accumulation in building assemblies and thermal management to manage the comfort of occupants. This presentation will describe how resiliency connects with energy efficiency and durability. An overview of resilience programs and how buildings are playing a part in them will be provided. The presentation will also include a review of the progress of industry standard practice and guideline development on the development of details to maintain air, water and thermal barrier continuity and integrity.

MANAGING HVAC IN HIGH PERFORMANCE BUILDINGS – HOW TO PROVIDE COMFORT, SAFETY, HEALTH, AND REDUCE BUILDER LIABILITY *EEBA TRACK*

PRESENTERS: *Luis Imery, Imery Group; Rob Howard, Mitsubishi Electric Cooling and Heating & Nikki Krueger, Therma-Stor*

ROOM: *Gallier AB*

Tightly air-sealed, well-insulated buildings combined with increased ventilation rates has become mainstream, and in many cases required by code, and there is no going back. Better construction requires less heating and cooling, and better moisture management. In many cases, traditional HVAC equipment will not provide adequate space conditioning in high performance buildings, leading to poor heating, cooling, and humidity control. These problems lead to uncomfortable homes, excess energy use, and, in some cases, legal liability for the builder. It is critical for builders to understand how the way they build affects HVAC design requirements, and how to properly choose “right-sized” equipment for their projects.

Real-world data and case studies will be presented to show that when it comes to occupant comfort and health, HVAC design can no longer be an afterthought. Strong graphic images will be used to visually demonstrate building science principals and show how the old ways of addressing heating, cooling, and moisture management are no longer viable. We will demonstrate how high performance building changes the dynamics of heat and moisture movement in and out of buildings, and the affect on HVAC design and equipment selection.

This seminar will include three unique perspectives on the subject. One long time builder and building science expert will share his recent experience with ductless HVAC, ventilation, and dehumidification in a new high performance home. A second builder with extensive experience in affordable housing will review designing and selecting HVAC equipment for high performance buildings.

Finally, we will hear from a manufacturer that pioneered whole house dedicated moisture control solution about current available solutions and products in the pipeline to improve heating, cooling, ventilation, and humidity control in high performance homes.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

8:30 AM – 10:00 AM

RESNET ONLINE QUALITY ASSURANCE REVIEWS AND THE POWER OF QA GENIE *

PRESENTERS: *Scott Doyle & Billy Giblin, RESNET*

ROOM: *Oak Alley*

The RESNET QA Team will discuss the results of their 2018 online QA reviews as well as how QA Genie is used to analyze ratings in preparation for the reviews. The session will cover the findings from the online QA reviews along with trends and common flags in QA Genie.

LEARNING FROM EXPERIENCED HERS PROFESSIONALS

PRESENTERS: *Robby Schwarz, EnergyLogic; Karla Butterfield, Steven Winter Associates & Tony Lisanti, Integral Building & Design*

ROOM: *Nottoway*

If you're new to the HERS and the ratings industry, then here is your chance to learn from the experience of HERS rating veterans.

This moderated Q&A will include a panel of experienced raters coming together to talk through what is needed to excel in the HERS Rating Industry, with builder relationships, rating techniques, data management, business best practices.

WITH 16,000 HOME PERFORMANCE REPORTS, WE MUST BE DOING SOMETHING RIGHT

PRESENTERS: *Tom Gavaras, BATC-Housing First Minnesota & Ross Anderson, BATC-Housing First Minnesota*

ROOM: *Grand Couteau*

We'll show you strategies for bringing together your utilities, builder community, and raters to grow recognition of green building techniques generally and more specifically, to promote the HERS rating. We'll talk about a program called Minnesota's Green Path in which the utilities help the raters and the builders association highlight energy-efficient building techniques by the promotion of the HERS index through its home tours and related publications, website, marketing, and social media. Green Path is the leading energy efficiency and green building program for the residential construction industry in Minnesota. Created by BATC-Housing First Minnesota in 2011, the program has provided Home Performance Reports to more than 16,000 newly built homes highlighting RESNET's HERS score and air exchange rate. We'll show you how to leverage the connections of your local or state association to continue elevating energy-efficient building.

THE RESNET – APPRAISAL INSTITUTE PARTNERSHIP: IMPLICATIONS FOR THE REAL ESTATE AND HERS INDUSTRIES

PRESENTERS: *Ryan Meres, RESNET & Stephen S. Wagner, MAI, SRA, AI-GRS, Appraisal Institute*

ROOM: *Grand Chenier*

For three years, RESNET and the Appraisal Institute have had a dynamic partnership to promote green and high energy performance homes in the market place. To date, this partnership has resulted in HERS Raters having the opportunity to auto-populate the Green Appraisal Addendum and the launching a portal that allows appraisers access to HERS rated homes data in the RESNET National Registry. This session will feature the RESNET Program Director and the President of the Appraisal Institute discussing the results of the partnership and new directions that it can take. The discussion will also address the implications for the housing industry.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

8:30 AM – 10:00 AM

ENERGY STAR MULTIFAMILY NEW CONSTRUCTION PROGRAM: Q&A **FEDERAL HIGH-PERFORMANCE HOUSING TRACK**

PRESENTERS: *Rebecca Hudson, EPA & Gayathri Vijayakumar, Steven Winter Associates*

ROOM: *Bayside A*

If you attended the high-level session about the new ENERGY STAR Multifamily New Construction program, you know that Rater Training will be available soon and will cover the details of the new Rater Design and Field Checklists. But what about everything else? Come to this interactive session with questions on any of the following and we'll dive into the details based on the level of audience interest: certification process & training, the HVAC Design Report and Functional Testing Checklist, impacts on energy modeling, and whatever else you want the program leads to explain in greater detail. Before the session, please visit www.energystar.gov/mfnc to print or download the program documents that we will be discussing, such as the MFNC National Program Requirements, Rater Design & Field Checklists, HVAC Design Report, Functional Testing Checklist, and ERI Target Procedures.

EMERGING TECHNOLOGY AND THE BUILDING INDUSTRY

PRESENTERS: *Colby Swanson, Momentum Innovation Group & Steve Byers, EnergyLogic*

ROOM: *Bayside B*

As technology continues to push boundaries, it is more important than ever to stay on top of new innovation and how it affects the way we build homes. In this session, we'll take a look at the significance of current and emerging technology taking place both inside, and outside, the building industry. Participation will be encouraged as we spend a significant portion of the session having a conversation about how these advancements are currently being used, or could potentially be used, and how they could change the way we build, live in, and analyze homes.

MYTHBUSTING HOT WATER MISCONCEPTIONS

PRESENTER: *Dan Wildenhaus, TRC*

ROOM: *Bayside C*

The water heating landscape is ever evolving with new products and tools to quantify efficiency benefits. The myriad options can raise several questions: Are heat pump water heaters or tankless gas units better? What are CO2 water heating units? Are structured plumbing layouts necessary with WaterSense fixtures? To add to the confusion, every building science professional has some pre-conceived notion about what does and does not influence energy efficiency. One way to analyze the options, is to consider the impact of both the Water Rating Score and the forthcoming Water Rating Index tools. This session will address common misconceptions about HPWHs, on-demand recirculation systems, routine maintenance, plumbing design, and more.

THE NEW ASHRAE STANDARD 90.2 – 2018 FOR HIGH PERFORMANCE RESIDENTIAL BUILDINGS

PRESENTER: *Theresa Weston, DuPont Performance Building Solutions; David Goldstein, Natural Resources Defense Council & Philip Fairey, FSEC*

ROOM: *Gallier AB*

ANSI has recently approved ASHRAE's new 90.2 leadership standard for high performance residential buildings. The compliance provisions of this new standard are based on the ANSI/RESNET/ICC 301-2014 Standard as modified for hot water heating by Addendum A-2015 and as modified for the Index Adjustment Factor by Addendum E-2018. The Energy Rating Index (ERI) compliance scores for this new ASHRAE 90.2 leadership standard represent efficiencies in the mid-40 range and are significantly more efficient than either the 2018 IECC or 2015 IECC R406 requirements.

This session will discuss the genesis, development and cost effectiveness of the new ASHRAE 90.2 leadership standard, its performance requirements and its minimum mandatory requirements.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

10:30 AM – 12:00 PM

WHO WE ARE – A TOWN MEETING WITH RESNET STAFF

PRESENTERS: *RESNET Staff*

ROOM: *Oak Alley*

With the growth of the rating industry, the RESNET staff has expanded. The number of RESNET staff has doubled since the 2017 RESNET Conference. This session will provide an opportunity for attendees to connect with RESNET staff and understand that each staff member contributes. The session will allow participants to enter into a dialogue with the RESNET Team.

MEET AND GREET: GET TO KNOW YOUR FRIENDLY REGIONAL ENERGY EFFICIENCY ORGANIZATION (REEO)

PRESENTER: *Lauren Westmoreland, SEEA; Jim Meyers, SWEEP; Richard Morgan, SPEER; Darren Port & Bing Liu, NEEP & Ian Blanding, MEEA*

ROOM: *Nottoway*

You've probably seen us around, but do you really know who the REEOs are and what we do? Hint: if it has to do with energy efficiency, we're probably touching it! Come to this session to learn more about how code adoptions work (or don't work) in your state, the future of utility energy efficiency programs and resources available from DOE. Find out how you can get involved to ensure decision makers in your state are supporting energy efficiency.

DEVELOPMENT OF NEW RESNET ANSI CANDIDATE STANDARD ON RATING SAMPLING *

PRESENTERS: *Emelie Cuppernell, Performance Systems Development & Thiel Butner, Pando Alliance*

ROOM: *Grand Couteau*

The RESNET National Standard for Sampled Ratings (Chapter 6 of the National Home Energy Rating Systems Standards) needs an update. With all that we have learned since Sampling was originally introduced, the requirements can now be articulated more clearly so that implementation can be more consistent. The standard also needs to address any nuances of Sampling multifamily units, which were introduced in the RESNET Guidelines for Multifamily Energy Ratings.

The RESNET Standards Development Committee 900 on Quality Assurance established a new subcommittee last year, the Sampling Subcommittee, to take the lead in amending the RESNET standard for Sampled Ratings. Right now, an effort is being made to revise Chapter 6. After that update is complete, the Sampling Subcommittee will adjust it to develop a draft candidate ANSI standard.

ADAPT AND OVERCOME: HIRING A YOUNG WORKFORCE

PRESENTER: *Clint Shireman, Knauf Insulation*

ROOM: *Grand Chenier*

Where can you find new employees, and how will you keep them? What are the priorities of the new generation(s) of workers? This session will look at strategies for recruitment and investment of young employees with the goal of making a long-term career out of skilled trades.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

10:30 AM – 12:00 PM

4TH ANNUAL ZERO ENERGY READY HOME LEADING HERS RATER ROUNDTABLE – PART I *FEDERAL HIGH-PERFORMANCE HOUSING TRACK*

INVITATION-ONLY MEETING, BUT OBSERVERS WELCOME AS ROOM ALLOWS

ROOM: *Bayside A*

A dramatic movement to zero energy ready homes is gaining momentum. This includes statewide codes, large developments, and a growing commitment to the DOE Zero Energy Ready Home program. Continued progress will rely on an increasing number of HERS raters effectively bringing the business case, technical solutions, and verification services for Zero Energy Ready Home to our nation's builders. At this meeting, DOE will begin by sharing recommended actions from last year's Leading HERS Rater Roundtable along with a report on how the Zero Energy Ready Home program responded including 'A' thru 'F' grades (note we are notoriously tough graders). Then it's time to dig in and explore what leading HERS Raters have learned this past year verifying Zero Energy Ready Homes and what actions DOE can take to address key challenges. Zero is too important to fail, so it is critical that DOE listens and learns from HERS Raters who deliver the program to builders.

GETTING HERS TO ZERO: THE NEW RESNET & NBI ZERO ENERGY CERTIFICATION PROGRAM

PRESENTER: *Alexi Miller, PE, New Buildings Institute*

ROOM: *Bayside B*

RESNET and New Buildings Institute (NBI) are launching a new Zero Energy Designed Homes certification program. This certification program will leverage the HERS Index and will provide an exciting new way for our industry to market and promote the leanest, meanest, greenest new homes. Customers will have confidence that they are getting an ultra-high-performance home, builders will have a way to differentiate themselves, utilities will have a way to provide rebates and incentives, and HERS raters will have a new line of work. Come learn about this new, simple, easy-to-navigate program that will help catalyze the market for Zero Energy homes across North America.

REVIEWING THE RESEARCH: MAKING THE CASE FOR MINERAL FIBER INSULATION

PRESENTERS: *Charles Cottrell & Angus Crane, NAIMA, Home Innovation Research Labs*

ROOM: *Bayside C*

Builders have many choices for insulation products in new home construction, but shouldn't the insulation products they use be thoroughly tested? Fiberglass and mineral wool insulation products are sustainable and the most thoroughly tested for health and safety. The products have also undergone extensive thermal performance testing. Hear the results of research conducted by independent third-party labs and learn why such research should help inform insulation choices now and in the future.

380-2016 STANDARD AND CHANGES MADE FOR 2019 *

PRESENTER: *Iain Walker, LBNL*

ROOM: *Southdown*

Standard ANSI/RESNET/ICC 380-2016 has been required for all ratings permitted since July 1, 2018. This session will review key components of the 2016 standard as well as present the changes approved for the 2019 version. Come learn about the specific changes, how they may impact your ratings, and the transition timeframe.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

10:30 AM – 12:00 PM

DEBUNKING THE MYTHS: WHY DECARBONIZATION MAKES SENSE IN RESIDENTIAL NEW CONSTRUCTION

PRESENTER: *Nic Dunfee, TRC Energy Services*

ROOM: *Gallier AB*

Residential builders and developers have traditionally assumed that on-site gas appliances are the most energy efficient options available. This session will explore why, as more renewables come online, this idea no longer holds true, and will explore the role of an all-electric option for the decarbonization of residential buildings through residential new construction programs. This interactive, discussion-driven presentation will explain why in most regions of the country it is not only more efficient, but also healthier, safer, and more environmentally friendly to electrify residential new construction.

Drawing from experience designing and implementing a first of its kind residential new construction electrification program in Sacramento, California, the speaker will address how programs can mitigate specific obstacles and objections facing all-electric new construction. Additional insights include how the sponsoring utility is valuing these all-electric homes, and the conversion of avoided therms into kWh savings using a source carbon equivalency.

The session will identify builder, utility, owner, occupant, and environmental benefits of electrification, drawing from the review, real-life case studies, and cost-effectiveness analysis.

1:30 PM – 3:00 PM

ADVANCED ENERGY REBUILD: A DISASTER BRINGS TOGETHER OTHERWISE UNLIKELY PARTNERS

PRESENTER: *Nic Dunfee, TRC Energy Services*

ROOM: *Oak Alley*

In October of 2017, wildfires ravaged northern California, destroying over 200,000 acres and over 8,000 structures. The fires were especially damaging in Sonoma and Mendocino counties, particularly around the city of Santa Rosa. With so many homes destroyed, the area has witnessed an all-out community effort to help the community rebuild. The utility providers in the area joined the cause, with Pacific Gas and Electric (PG&E), California's largest investor-owned utility and natural gas provider to the area, structuring a program to enhance the incentives already available through their long-running residential new construction offering. At the same time, Sonoma Clean Power (SCP)—a local and relatively young community choice aggregator and electricity provider—developed a new construction program for the affected homeowners.

When program implementors first attempted to combine these efforts, the contrasting goals and objectives of the two very different organizations became evident; SCP was prioritizing all-electric homes, while PG&E was only permitted to incentive homes according to overall performance with no preference fuel source. Through compromise and creative thinking, both organizations combined efforts, procured additional funding, and designed a program to provide up to \$17,500 to homeowners rebuilding more efficient, above-code homes.

This session will focus on how the program design both addresses utility goals while providing much-needed assistance to homeowners. We will discuss how this unique, residential new construction program positions homeowner instead of builders and developers as participants, and how this change impacts marketing and outreach, budgeting, and implementation approaches.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

1:30 PM – 3:00 PM

VENTILATION AND DEHUMIDIFICATION GEEKS – THERMODYNAMICS ALWAYS WINS *

PRESENTER: *Paul H. Raymer, ICF & David Treleven, Thermastor*

ROOM: *Nottoway*

Mechanical ventilation is the only reliable means to ensure adequate fresh air moves through a house to dilute the pollutants. The ASHRAE 62.2 Standard prescribes the amount of air movement required, but it does not prescribe what system should be used to accomplish that flow. Even though the Standard is based on the best available information about indoor air pollutants, it does not explicitly address the impact on moisture, radon, carbon monoxide, or other pollutants or the cash cost of ventilation. And depending on the local climate and ventilation strategy, it's possible to encounter serious issues with excessive moisture and mold if humidity is not accounted for in the design. In this session, you'll hear from a long-standing member of the ASHRAE 62.2 Committee about the various approaches to mechanical ventilation (e.g. exhaust-only, supply-only, and balanced) and the pluses and minuses of their impact on fresh air and pollutants in homes. This discussion will be enhanced by field data from a recent study of homes in Virginia on mold and moisture. Finally, learn how active dehumidification might be used to improve both comfort and durability, or as an alternative to crawl space conditioning in climates where high humidity is an issue.

HVAC 101

PRESENTER: *Bill Spohn, TruTech Tools, LTD*

ROOM: *Grand Coteau*

What is HVAC and how does it work? The basic basics. Round out your whole house and building science knowledge with a better understanding of how HVAC systems work and effect other areas of the house.

Learning Objectives:

- Learn key HVAC terminology used in the technical and business areas of HVAC
- Understand the relationships between HVAC systems and home/building performance
- Feel more comfortable having a conversations regarding HVAC

FROM HERS RATER TO CODE OFFICIAL *

PRESENTER: *Robby Schwarz, EnergyLogic*

ROOM: *Grand Chenier*

Energy Code enforcement has many problems. First and for most, the majority of code official are at retirement age and jurisdictions are struggling to attract new talent. Next, many jurisdiction still believe that the energy code is not health and safety so do not delegate the resources necessary to achieve proper enforcement. Luckily for our industry, RESNET HERS raters are the logical choice to fill this quickly developing void. We are passionate, knowledgeable, and willing to step in to the code enforcement arena as designated approved third party inspection agencies. Come learn about what this new opportunity means and how to hone our skills to be successful. How is the Energy code structured and where and what can our role be in enforcement.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

1:30 PM – 3:00 PM

4TH ANNUAL ZERO ENERGY READY HOME LEADING HERS RATER ROUNDTABLE – PART II **FEDERAL HIGH-PERFORMANCE HOUSING TRACK**

INVITATION-ONLY MEETING, BUT OBSERVERS WELCOME AS ROOM ALLOWS

ROOM: *Bayside A*

A dramatic movement to zero energy ready homes is gaining momentum. This includes statewide codes, large developments, and a growing commitment to the DOE Zero Energy Ready Home program. Continued progress will rely on an increasing number of HERS raters effectively bringing the business case, technical solutions, and verification services for Zero Energy Ready Home to our nation's builders. At this meeting, DOE will begin by sharing recommended actions from last year's Leading HERS Rater Roundtable along with a report on how the Zero Energy Ready Home program responded including 'A' thru 'F' grades (note we are notoriously tough graders). Then it's time to dig in and explore what leading HERS Raters have learned this past year verifying Zero Energy Ready Homes and what actions DOE can take to address key challenges. Zero is too important to fail, so it is critical that DOE listens and learns from HERS Raters who deliver the program to builders.

YOU'VE HEARD OF WATERSENSE AND YOU'VE HEARD OF HERSH2O. **BUT WHAT DO THE TWO HAVE TO DO WITH EACH OTHER?**

PRESENTERS: *Jonah Schein, WaterSense US-EPA & Ryan Meres, RESNET*

ROOM: *Bayside B*

The EPA WaterSense Homes program was designed to give consumers and building professionals the ability to easily define and identify high performing, water efficient homes. But the building industry has changed substantially since the program was first introduced in 2009. Based on feedback from stakeholders, years of operational knowledge, and changes in the home building marketplace; EPA is planning a series of updates to the WaterSense labeled homes program that will result in a greater focus on quantifiable water savings, performance, and leveraging new tools in the market. In the meantime, RESNET has been developing the HERSH2O water rating index with the aim of creating a companion product to HERS for water, one of our most vital resources.

Through this planned partnership, EPA and RESNET hope to establish a powerful link between WaterSense and HERSH2O. The session will highlight the anticipated changes to WaterSense labeled homes and delve into how HERSH2O can contribute to the revised program's efficiency requirement. Thus allowing the programs to work in concert with one another with the goal of creating a clear message about a home's water use.

THERE'S AN APP FOR THAT! – MAKING LIFE EASIER WITH TIPS AND TRICKS TO USE IN THE FIELD *

PRESENTERS: *Sam Myers, Retrotec & Joe Medosch, Hayward Score*

ROOM: *Bayside C*

Energy audits and HERS Ratings can be time consuming to conduct, especially if you are trying to diagnose an issue for a building owner or occupant. This session will provide some faster methods and remove some frustration when performing certain tasks in the field whether it is taking measurements, reviewing plans, or setting up your duct testing equipment. Technology has evolved to help the building performance industry by offering more efficient products and methods for measurement and recording data. We'll look at apps, software, and equipment along with some low-tech, low-cost practices that can help you be more productive in the field. We'll even provide instructions for building your own 2-in-1 diagnostic tool that serves as an exhaust fan flow meter and a pressure pan.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

3:30 PM – 5:00 PM

WHO'S RIC AND HOW CAN SHE IMPROVE MY HERSH2O SCORE? *

PRESENTERS: *Jonah Schein, U.S. EPA; TBD, Southern Nevada Water Authority; TBD, Energy Inspectors*

ROOM: *Oak Alley*

The Residential Irrigation Capacity Index (RICI) is part of the calculations to determine the HERSH2O Index Score. Since irrigation has a significant impact on a home's water use, understanding how RICI works can allow builders to reduce water consumption and drive down their HERSH2O scores. Come to this session to learn from irrigation and rating experts about what RICI is and how it can be used to improve water efficiency and reduce a home's HERSH2O score.

RATINGS FOR ENERGY CODE COMPLIANCE*

PRESENTERS: *Mike Turns, Performance Systems Development*

ROOM: *Nottoway*

With at least 14 states incorporating the Energy Rating Index (ERI) into their energy code, the HERS industry is being thrust into the spotlight, making accuracy and consistency of ratings even more important. But the idea of performing ratings for energy code compliance has raised a number of questions for raters, builders, and code officials. What is an Energy Rating Index and is it different from the HERS Index? Are ratings for code compliance subject to RESNET QA processes? Is duct leakage testing required even when the code has an exception? What documentation should be provided to code officials? Are raters responsible for verifying other "mandatory" requirements in the code? Is there any oversight of people doing blower door or duct leakage testing and not full ratings? Learn about how the energy code requirements and RESNET standards overlap and diverge and join the discussion to help reach consensus.

DUCT TESTING, EXEMPT OR NOT EXEMPT? *

PRESENTERS: *Emelie Cuppernell, Performance Systems Development; Ethan MacCormick, Performance Systems Development*

ROOM: *Grand Chenier*

With various rules for duct testing existing in the market, it can be hard to sort out when and where a duct leakage test must be performed. The duct leakage to outside test is a minimum rated feature required for a confirmed HERS Rating unless a home meets the RESNET duct test exemption. However, if a rating is performed for code, and the code language indicates duct testing is exempt, is it exempt for a rating even if it does not meet the RESNET exemption? What takes precedence?

In this session we will discuss how duct testing is interpreted by various raters, programs, and codes in the Northeast, and what clarity may be needed in the industry going forward.

THE TOP 10 TECHNICAL CHALLENGES OF ZERO ENERGY READY HOMES

PRESENTERS: *Jamie Lyons & Joe Nebbia, Newport Partners*

ROOM: *Bayside A*

There are plenty of builders who make it look easy to construct Zero Energy Ready Homes, but chances are they didn't get it perfect on the first project. These homes combine impressive efficiency levels with a collection of common-sense measures for IAQ, moisture, and comfort. So where do raters, builders, and designers run into problems? In this session we'll review the Top 10 technical challenges of designing and building Zero Energy Ready Homes based on years of partner feedback, and then showcase the best solutions for tackling these challenges with production-friendly, cost-effective measures.

BREAKOUT SESSIONS

(CONTINUED)

WEDNESDAY,
FEBRUARY 27

3:30 PM – 5:00 PM

LOWER HERS INDEX SCORES COMMAND BETTER SALES PRICE

PRESENTER: *Curt Hurd, North Carolina Building Performance Association*

ROOM: *Grand Couteau*

The North Carolina Building Performance Association (NCBPA)'s North Carolina Energy Efficient, Green and High-Performance Home and Building Inventory Report found an average 9.5% premium for high performance homes sold in three metro markets in North Carolina over a two-year period. The report analyzed 34,152 high performance homes and buildings being built or retrofitted in North Carolina. NCBPA reports that working alongside research partner National Association of Home Builders (NAHB), the study found that homes with HERS Index Scores between 40 and 89 commanded a price of between \$85.89 and \$162.52 per square foot. This session will present the results of this ground-breaking study and discuss lessons that can be learned for the rest of the country.

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