Agenda

• Goals of NEEA and alignment with creating a robust Rater network
• Early efforts to build the Rater network in the NW
• The height of NWESH market share and how Raters contributed to it
• Impact of NW success and increasing code
• Questions and fun stuff
The Cause
NEEA harnesses the power of 13 million energy consumers in four Northwest states.
How We Work

IDENTIFY BARRIER/OPPORTUNITY

INTERVENE TO REMOVE OR LEVERAGE

TRACK AND EVALUATE MARKET PROGRESS
Driving Market & Code Adoption
The Raters
The early days

Transitioning from Verifiers to Raters

Early prescriptive program 2004-2011
- Verifiers

Transition to performance program 2012
- “Otherwise approved” Verifiers

National program alignment 2015
- Raters and RFIs
Trying something new

The “what if” scenario

What if:

- We provided dedicated training and mentoring to a Rater in a “hot market”
- We answered the phone every time the Rater asked questions
- We accompanied site visits and integrated design meetings with the Rater
- We provided connections to market actors, manufacturers, and utilities
Robust, diverse network

August 2016 NW Raters/Verifiers

Program Participation

NWESH, NBGS
NWESH
NWESH, ETO
NWESH, NSH
NWESH, NSH, ETO
ETO
The Partnerships and evolving support
Support TO Raters and FROM NEEA

- Technical Support
- Marketing Support
- Program Support
- Business Support
- Props up Raters

- Northwest ENERGY STAR Homes
- Hot Water Solutions
- Pilots and special projects
- Across Initiatives

Northwest Ductless Heat Pump Project
Changing database functionality
And don’t forget about modeling!

Modeling Guidelines for Northwest REM/Rate™
Updated July 1, 2015

The Northwest ENERGY STAR® Homes program, in collaboration with NORESCO, has developed a Northwest version of the REM/Rate™ modeling software that has been adjusted for closer alignment with regionally accepted values. To qualify for Northwest ENERGY STAR certification, all single-family homes must be modeled in Northwest REM/Rate. While builders have some flexibility in constructing their homes to meet the program requirements, Raters must follow specific guidelines for data entry in addition to the standard REM/Rate protocol. This ensures that certified homes meet or exceed the minimum performance requirements of the Northwest ENERGY STAR Reference Home for your state.

How does the Northwest version of REM/Rate differ from the national version?
- The Northwest version compares the modeled home with state-specific reference homes
- Foundations have been restricted to the following four types:
  - Slab
  - Enclosed Crawlspace
  - Conditioned Basement
  - Unconditioned Basement
- Windows areas locked with preset minimums
- Shading factor inputs for windows locked to preset values
- Ground contact, duct leakage, infiltration, and heat pump behavior models adjusted for closer alignment with regionally accepted values based on calibrated software
- Tankless water heaters de-rated for consistency with DOE/RTF recommendations
- DHW gpd/day consumption overridden to regionally accepted values
- HRV/ERV efficiency input set to align with regionally accepted values

What guidelines must Raters follow when modeling their homes?
- The Northwest version of REM/Rate must be used to determine compliance for Northwest ENERGY STAR Home certification. The version can be identified by checking for “Northwest” at the header of the software following the version of REM/Rate.
Technical Marketing

Supporting Market Transition/Development

Verifier Tool Kit
- Thermal Enclosure Best Practices Poster
- Technical FAQ Guide
- Ductless in New Construction Flyer
- Program Technical Overview
- Multifamily Certification
- Performance Path
Better access to training

Regional RESNET Conference!

2012 Boot Camp – Seattle
2013 Boot Camp – Boise
2014 Boot Camp – Bend
2015 Home Efficiency Forum – Portland
2016 Home Efficiency Forum - Spokane
Home Certifications Programs
The Impact
Next Step Home Pilot Program
Rater Accuracy study/training

BACKGROUND AND SCOPE

NEEA Pilot Rating Project

- In Q1 of 2015, NEEA asked Raters throughout the region to model a common set of homes based on plans and specs provided
- 12 homes in various Northwest locations
- 8 Raters participated
- The pilot team performed an independent set of models, which were included in the data set

CENTRAL QUESTION

What does it take to model “utility-grade” savings estimates in REM/Rate™ at a regional scale?

GOALS

- Quantify model variability introduced by Rater modeling practices, identify gaps in existing guidance
- Use the findings to improve model consistency, accuracy, and fill gaps in existing modeling guidance
Fine tuned Rater training

Pre-Construction Survey
Efficient Homes Pilot | July 22, 2015

COMMISSIONING FOR SUCCESS
Efficient Homes Pilot | December 3, 2015

CALCULATING PI
Efficient Homes Pilot | September 23,
Raters stepping up

Evergreen Certified – Tadashi Shiga

Sustainable Homes Consulting LLC => Tri Cities HBA – Jonathan Jones

Building Energy – Ingo Stroup
Performance Protocol

Primary Goal
− Align all market actors—utilities, REALTORS®, builders, Raters, MLS providers, financers, homebuyers—with a metric that differentiates homes based on annual energy consumption.

Objectives
− Easy for Utilities to capture savings
− Framework for Builder Training
− Improve New code opportunities

Utility Grade Savings
A group of Documents that describe how Raters (and utility staff) generate energy savings estimates using REM/Rate™
• Modeling Guidelines
• Minimum design requirements
• Quality assurance requirements
• Calibration to field data
• Research Plan
The destination
What is BetterBuiltNW?

Role of BetterBuiltNW

- Online resource for residential new construction market actors
- Serves as a platform to accelerate market adoption of energy-efficient products and practices
- Plays a supporting role by equipping market actors with tools and knowledge required to drive energy efficiency in the market
- Provides value to regional partners and stakeholders
BetterBuiltNW Communications

**e-Newsletter**

**Training Email**

**Bulletins**
Home Efficiency Forum

HOME EFFICIENCY FORUM 2016
October 12 – 14 | Spokane, WA

CONFERENCE AGENDA

Wednesday, October 12
6:00-9:00 pm Opening Reception and Early Conference Check-in

8:00-9:00 am Hosted Breakfast

9:00-10:00 am Keynote Address: Looking at Tomorrow Today
John Tooley, Advanced Energy

10:00-10:15 am Break

10:15-11:30 am Built Green Homes: How Much Electricity Do They Actually Use?
Leah Mossak, Built Green, Master Builders Association
The IAQ Marketing Challenge in New Construction
Leah Mossak, Built Green, Master Builders Association
Peter Troast, Energy Circle

11:30-10:45 am Break

11:45 am–12:30 pm ENERGY STAR® in the Northwest
Rick Gasco, ICF International
Preston Kuckuck, Performance Insulation
Greg Cavenport, Mitsubishi Electric
Kimberly Lewellyn, Mitsubishi Electric

12:30-1:30 pm Hosted Lunch

1:30-3:00 pm Leveraging Adult Learning Principles to Add Value to Your Builders
Bill Taylor, Advanced Energy
Dan Widenhaus, CLEAREnergy

3:00-3:30 pm Break

3:30-5:00 pm Panel: Energy-Efficient Home Valuation Through Data Centralization and Sharing
Bob Burns, Pivot Energy Solutions
Fiona Douglas-Hamilton, SEE2C LLC
Michael Atkins, Earth Advantage
Matthew Christie, TRC Energy Services
Moderator: Shaun Hazel, Advanced Energy

5:30-6:00 pm Home Efficiency Forum After Dark at Steam Plant (Commons Room)

Friday, October 14
8:00-9:00 am Hosted Breakfast

9:00-10:30 am New Multifamily Building, From Above Code to Zero-Energy Ready (1.5 BPI CEU)
Jess Kincad, Bonneville Power Administration
Equipment Selection for Modern Times (1.5 BPI CEU)
Mark Jerome, CLEAREnergy

10:30-11:00 am Break

11:00 am–12:30 pm Myths and Mandates of Spray Foam
Eric Bell, Westside Drywall and Insulation, Inc.
Making the Case for Best Practices in Residential Construction: Selling the Services of Energy Professionals (1.5 BPI CEU)
Ken Baker, Northwest Energy Efficiency Alliance

12:30-1:30 pm Hosted Lunch

1:30-2:15 pm Everything you need to know about A.O. Smith Heat Pump Water Heaters
Chris Smothers, A.O. Smith
How to Make Money with REMRate™
David Hales, Washington State University Extension Energy Program

2:15-2:45 pm Break

2:45-3:45 pm Closing Session
Panel: Demystifying Home Certification Programs in the Northwest
(1.5 BPI CEU)
Moderators:
Neil Grigory, Northwest Energy Efficiency Alliance
Matthew Christie, TRC Energy Services

Map of Conference Location and Floor Plan
Questions?
THANK YOU

The BetterBuiltNW Team

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