



Where Do We Go From Here?

The Future of ENERGY STAR Certified Homes

October 26, 2016



Who's Ready for Version 4?



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Stability

Coordination

Transparency

Responsiveness

Support

Appreciation

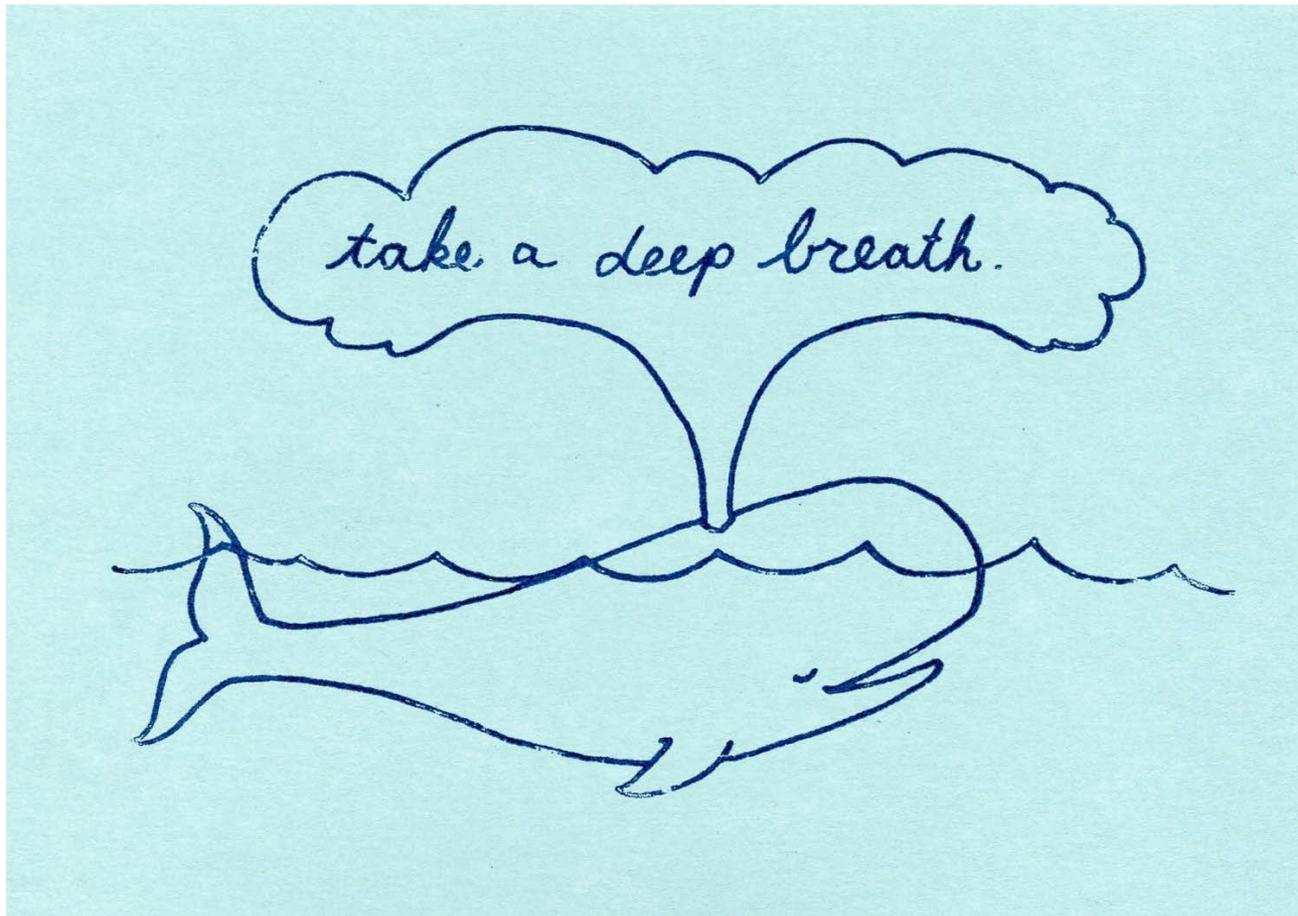
Specification Development Cycle



Who's Ready for Version 4?



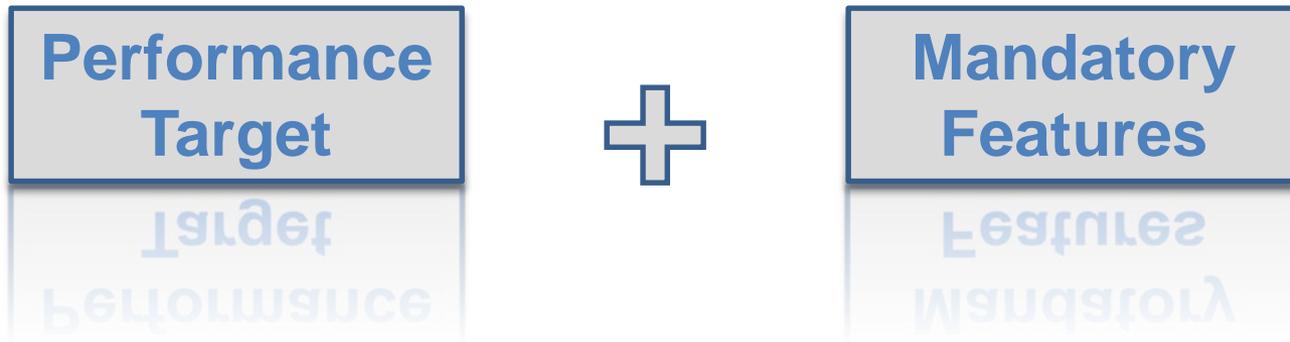
Who's Ready for Version 4?







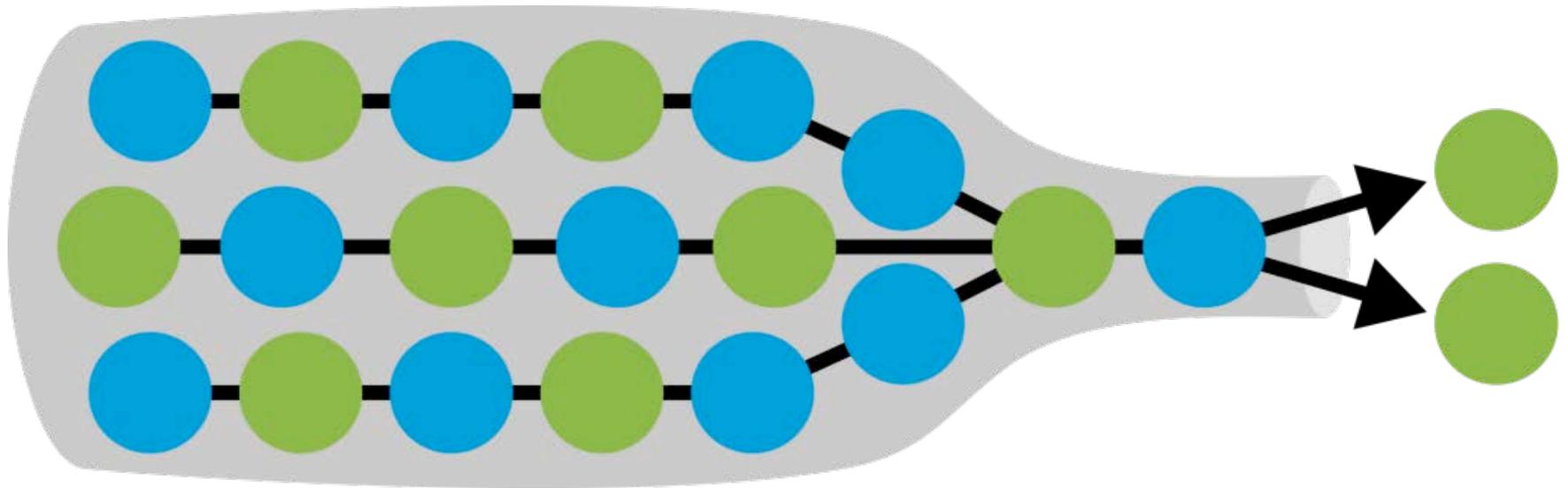
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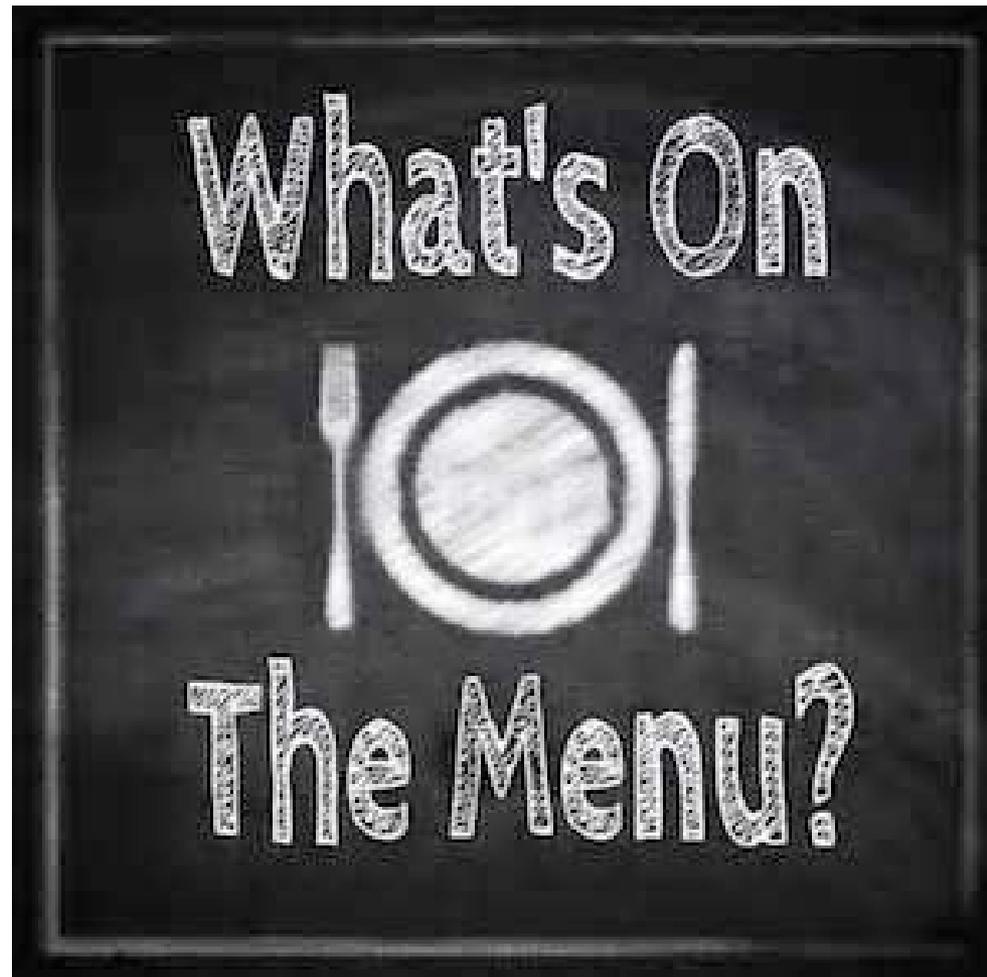


A high jump bar is shown against a bright blue sky with wispy white clouds. The bar is silver with red and white segments. The text "RAISING THE BAR. AGAIN." is superimposed in the center of the image.

**RAISING
THE BAR. AGAIN.**







Efficiency Features





Overview

- Central to our program
- Need to:
 - Achieve meaningful savings
 - Maintain cost-effectiveness
 - Be integrated with HERS standard (before they're required!)



Possible Efficiency Features

- High-efficiency water heaters
- LED lighting
- ENERGY STAR connected thermostats
- Credit for proper HVAC design & installation
- Buried & encapsulated ducts / ducts in conditioned space
- Variable capacity HVAC
- Efficient whole-house ventilation systems
- Home Energy Management Systems
- Increased insulation



Possible Efficiency Features

- Additional air barrier requirements (blocking under kneewalls)
- Ban electric resistance equipment
- Smart technology – HVAC / interactive with homeowner
- Use of EnergyPlus to generate energy savings
- Innovation points for measures that are not in software
- “Free Pass” certification

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Non-Energy Features





Overview

- Also central to our program.
- Non-energy features ensure that efficiency is not delivered by sacrificing other attributes.
- Rooted in building science.
- Need to:
 - Be verifiable by the Rater through their normal workflow
 - Recognize that non-energy features will negatively impact cost-effectiveness.
 - Clearly express the value of these features



Possible Non-Energy Features

- Better / smarter whole-house ventilation systems
- Dehumidification in hot-humid climates
- Higher MERV filters
- Balancing of register airflows
- Smarter kitchen and bath fans
- No unvented combustion appliances
- Enhanced verification



Possible Non-Energy Features

- Less ventilation than 62.2 in hot-humid climates
- Consumer education
- Modify credential requirement for small companies
- Improve green appraisal process
- More photos of Rick in small shirts
- Assess whether performance is same year after year
- Option / certification after improvements
- ENERGY STAR homeowner group – green living, product replacement / updates, house valuation, smart homes
- “Still ENERGY STAR” verification

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Renewable Energy Features





Overview

- Traditionally, renewable energy features have not been part of the program.
- The landscape is starting to shift.
- Want to be proactive in figuring out what role they can play.
- Need to:
 - Recognize that we'll continue to be an efficiency first program.
 - Develop clear messaging on how efficiency and renewable energy work together in ENERGY STAR homes.
 - Be complimentary (or at least not contradictory) to goals of utility partners
 - Be verifiable by the Rater through their normal workflow



Possible Renewable Energy Features

- Promote inclusion of renewable-energy-ready features
- Allow use of renewable energy features, beyond mandatory efficiency target, to earn special recognition
- Simply set a more stringent HERS index target, beyond ENERGY STAR, and recognize partners who hit this target through either efficiency or renewable energy features



Possible Renewable Energy Features

- Choose one mandatory requirement:
 - Site generation
 - Passive solar design
 - Day lighting design
- Is this even in your scope?
- What is value proposition?
- Is there consumer demand?

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Demand Management Features





Overview

- Utility partners have historically valued energy savings.
- Increasingly, utilities are valuing demand savings.
- Is there a way to overlay a package of measures that reduce demand, to help meet utility goals?
- Need to:
 - Not compromise homeowners' experience.
 - Ensure that program does not become too complex
 - Be verifiable by the Rater through their normal workflow



Possible Demand Management Features

- Very low SHGC windows
- Buried & encapsulated ducts / ducts in conditioned space
- Connected ENERGY STAR appliances
- Variable-capacity HVAC
- Energy storage
- A demand-management performance target



Possible Demand Management Features

- Will including DR compromise EE benefits?
- How will this impact cost effectiveness?
- Demand response credit, provided that comfort & IAQ are not scarified.
- What does “connected” look like:
 - 5% efficiency credit (e.g., for connected appliances)?
 - Requirements for individual equipment?
 - Home energy management?

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Additional Thoughts? Ideas? Suggestions?

