ENERGY STAR®

RaterPRO™

Preview

RESNET Conference

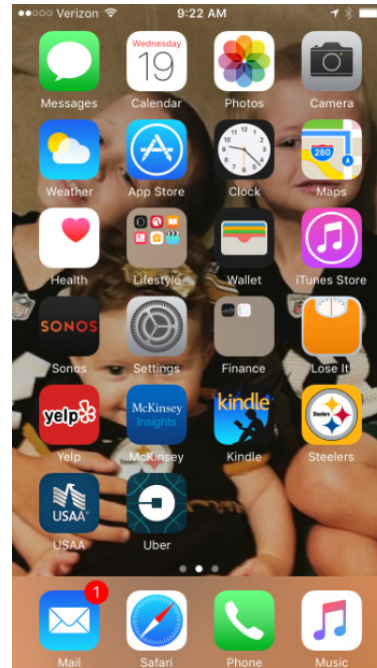**February 27th, 2017**

EPA

Agenda

- Apps are problem solvers

- Problems to solve

- A better way

- ENERGY STAR RaterPRO tour

- ENERGY STAR RaterPRO demo

- Next steps

- Q&A

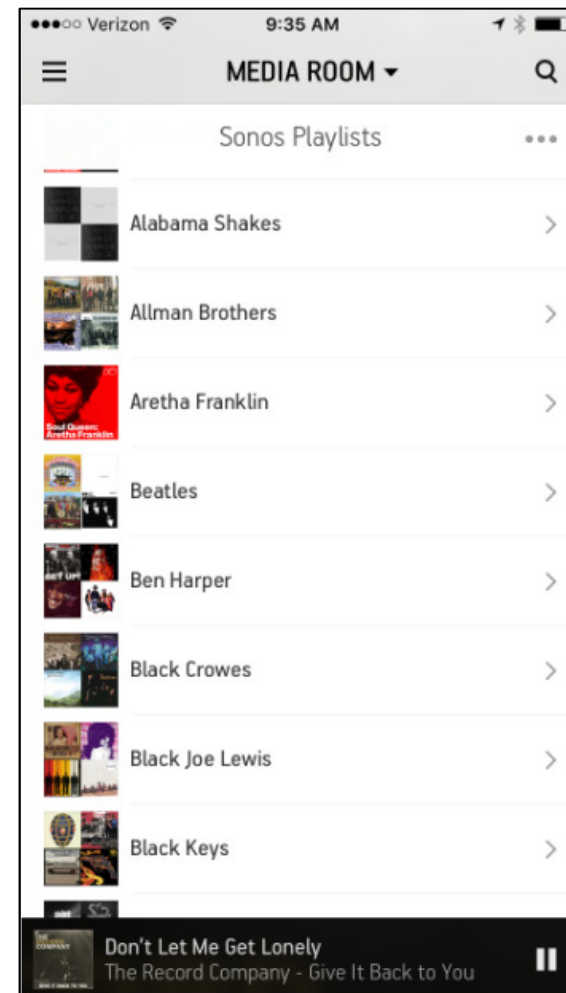# Apps Are Problem Solvers

Apps Are Problem Solvers

- The first App was launched in July of 2008

- Since that time over 2 million IOS apps and 2.2 million droid apps have been developed
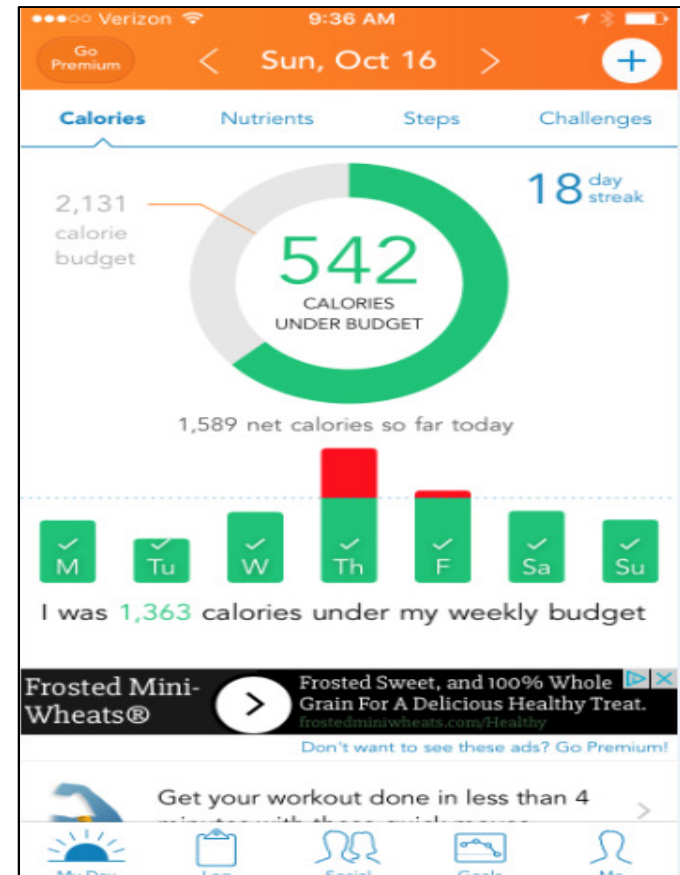
- Apps are problem solvers

Apps Are Problem Solvers

- Problem: Desire to hear the top 30 million songs ever recorded

- Solution: Sonos paired with Apple Music has made my dinner experiences wonderful

Apps Are Problem Solvers

- Problem: Dean keeps showing this picture of me at conference presentations.

- Solution: LoseIt App to make the picture look dated

- Problem: Actually have to use the app

Apps Are Problem Solvers

- Problem: Taxi's have a monopoly, and they don't serve the suburbs

- Solution: People will drive their car for money

7
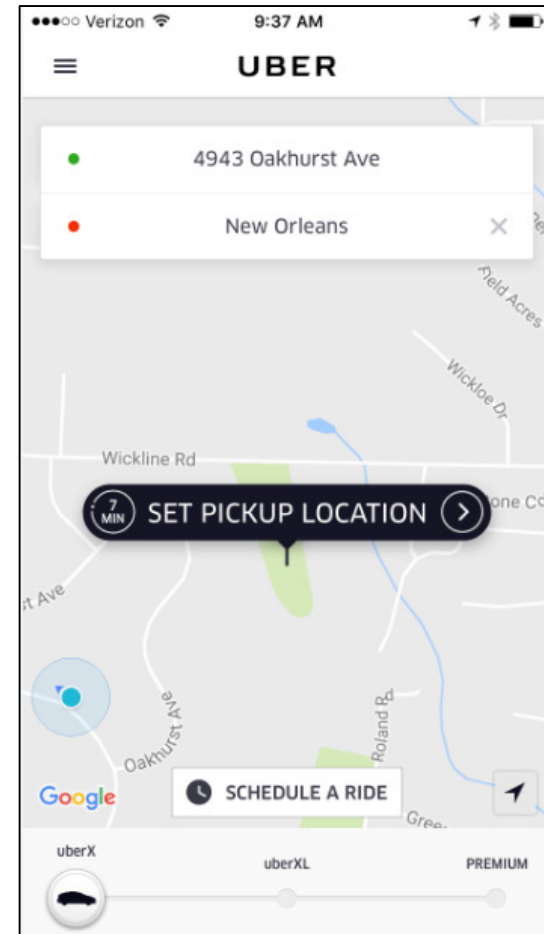
Apps Are Problem Solvers

- Problem: Humans have too many accidents

- Solution: Robots drive cars in Pittsburgh, and now piloting in Arizonia

Apps Are Problem Solvers

- Apps are problem solvers

- They spur innovation beyond the app itself

Problems to Solve

The Granite Problem

- Missing granite countertops can be easily spotted.

The 'Not Granite' Problem

- Missing blower door test cannot be easily spotted.

The 'Not Granite' Problem

1

HERS Modeling of Proposed Home

2

Field Inspections

3

HERS Modeling of Confirmed Home

The 'Not Granite' Problem

- 1st Problem: The value of a third-party field inspection is invisible for too many people.

The 'Carrier Pigeon' Problem
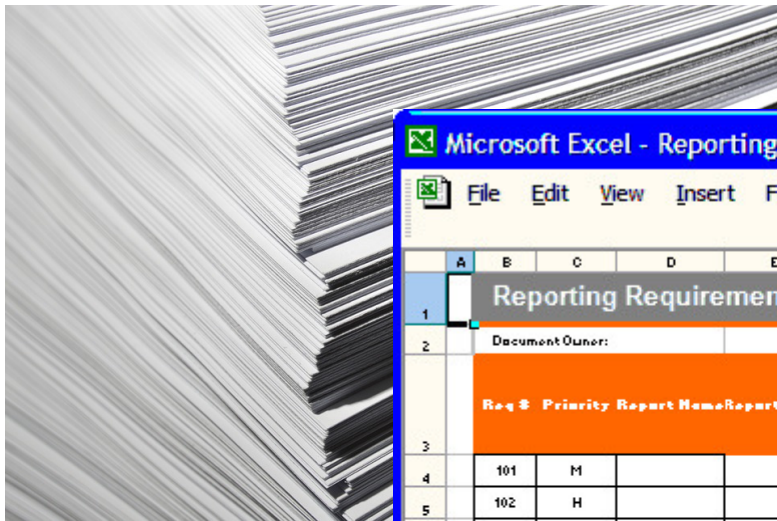
- Antiquated tools make it harder to get the job done.

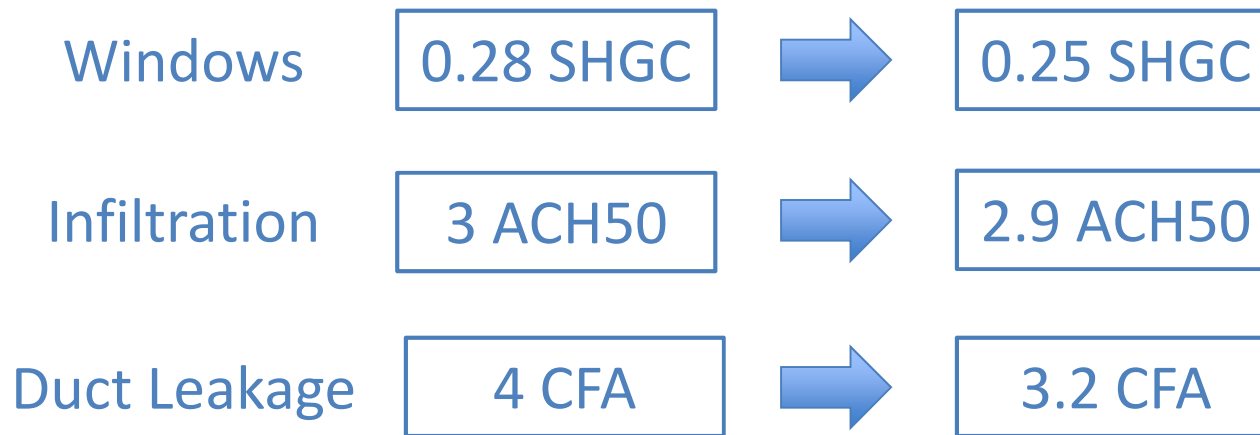# The 'Carrier Pigeon' Problem

R-30

R-19

The 'Carrier Pigeon' Problem

The 'Carrier Pigeon' Problem

Windows	0.28 SHGC	→	0.25 SHGC
Infiltration	3 ACH50	→	2.9 ACH50
Duct Leakage	4 CFA	→	3.2 CFA

Rater Field Checklist
ENERGY STAR Certified Homes, Version 3

Home Address: _____ City: _____ State: ___

Thermal Enclosure System

1. High-Performance Fenestration & Insulation

1.1 Fenestration meets or exceeds levels specified in Item 2.1 of the Rater Design Review Checklist

1.2 Insulation meets or exceeds levels specified in Item 3.1 of the Rater Design Review Checklist

1.3 All insulation achieves RESNET-defined Grade I installation. See Footnote 4 for alternatives. [4]

2. Fully-Aligned Air Barriers [5] At each insulated location below, a complete air barrier is provided that is fu...

The 'Carrier Pigeon' Problem

The 'Carrier Pigeon' Problem

- 2nd Problem: The baseline tools provided today take too much effort to do a high-quality field inspection.

Goal of RaterPRO

- Provide a tool that facilitates the collection of high-quality field data during the pre-drywall and final inspections.

- This helps increase the value, and reduce the cost, of a high-quality third-party rating.

A Better Way

A Better Way

- Interviewed over 30 separate HERS Rating companies.

- Discussed options with builders who combined construct over 100,000 homes annually, both production and custom.

- Held multiple calls with existing tool manufacturers, and HERS rating software companies.

- Invited Rating companies to all-day working session in DC to journey map homes.

A Better Way

1

HERS Modeling of Proposed Home

2

Field Inspections

3

HERS Modeling of Confirmed Home
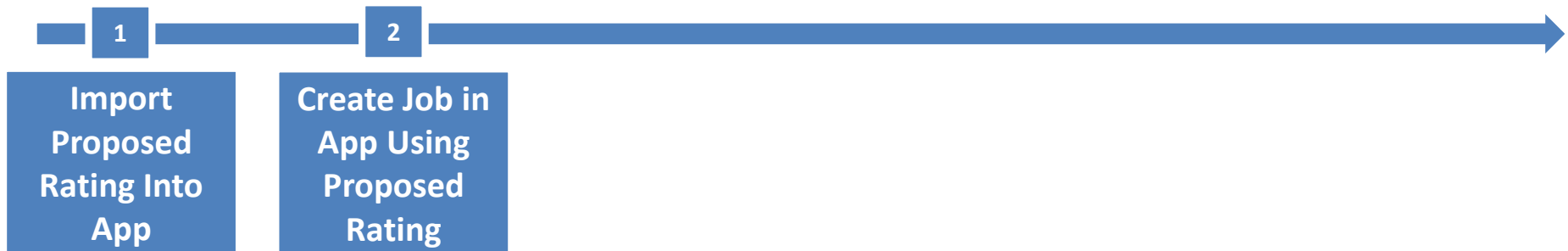
A Better Way

1

Import Proposed Rating Into App

- Complete HERS modeling of proposed home in HERS software. Then import into app.

- HERS Raters and Field Inspectors will be able to see the features of the proposed design when performing field inspections.

A Better Way

1 Import Proposed Rating Into App

2 Create Job in App Using Proposed Rating

- Create a job in the app for each home that will be built using the proposed rating that was imported.

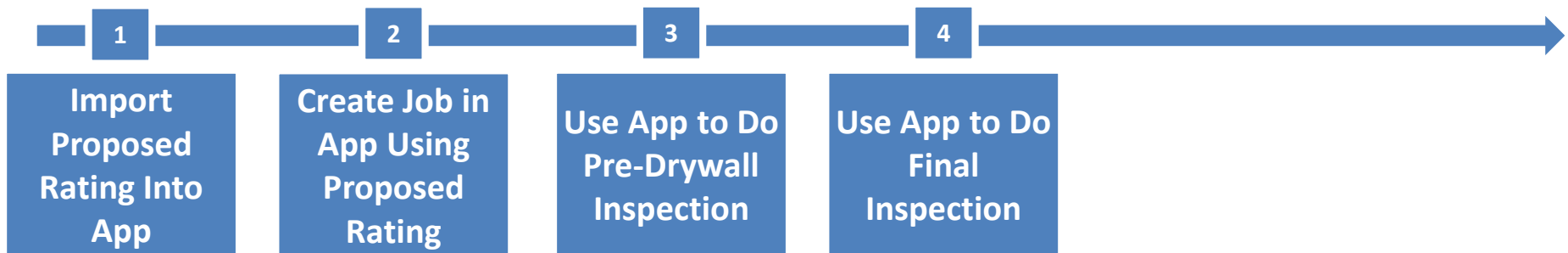- You can create multiple jobs using the same proposed rating.

A Better Way

1	2	3
Import Proposed Rating Into App	**Create Job in App Using Proposed Rating**	**Use App to Do Pre-Drywall Inspection**
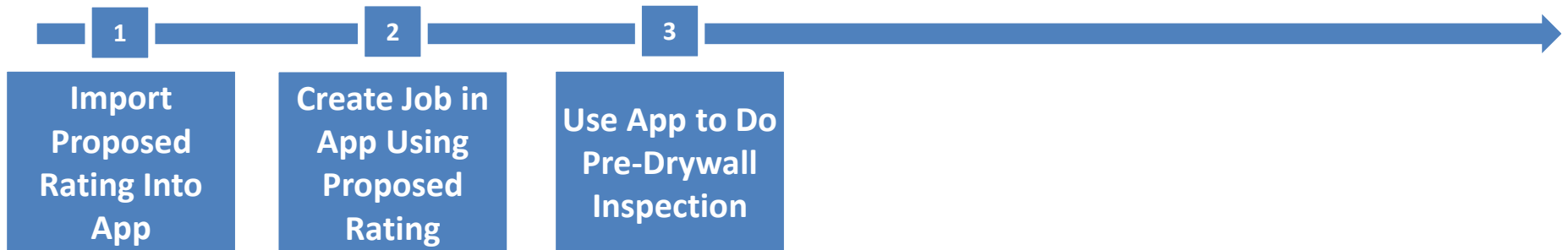
- Any Rater in the group can access that job in the field to complete the pre-drywall inspection.

- All features of the proposed rating are at your fingertips, plus all inspection items for ENERGY STAR homes.

- As you inspect, you can take change features, check off checklist items, take notes, and even take photos.

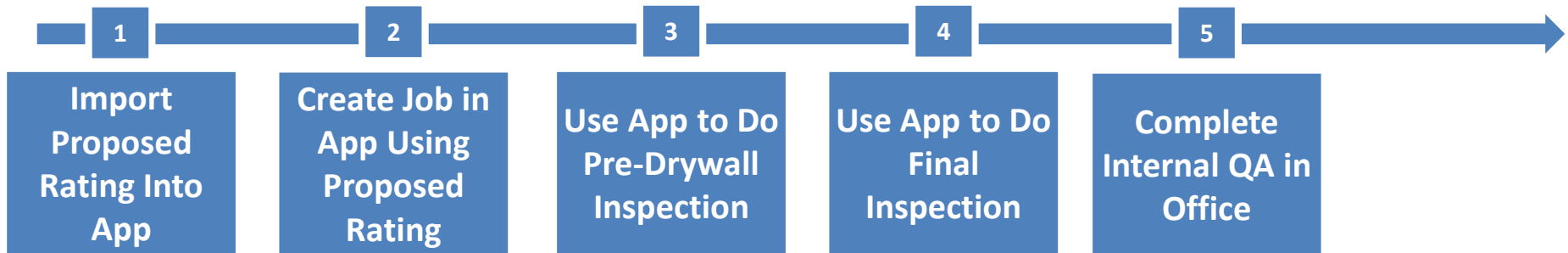- All info is automatically synced when you finish.

EPA

A Better Way

1	2	3	4
Import Proposed Rating Into App	**Create Job in App Using Proposed Rating**	**Use App to Do Pre-Drywall Inspection**	**Use App to Do Final Inspection**

- Any Rater in the group can access that job in the field to complete the final inspection.

- Same information and features are available, but tailored to final inspection tasks.

- Can open and use apps for connected devices from Retrotec and The Energy Conservatory.

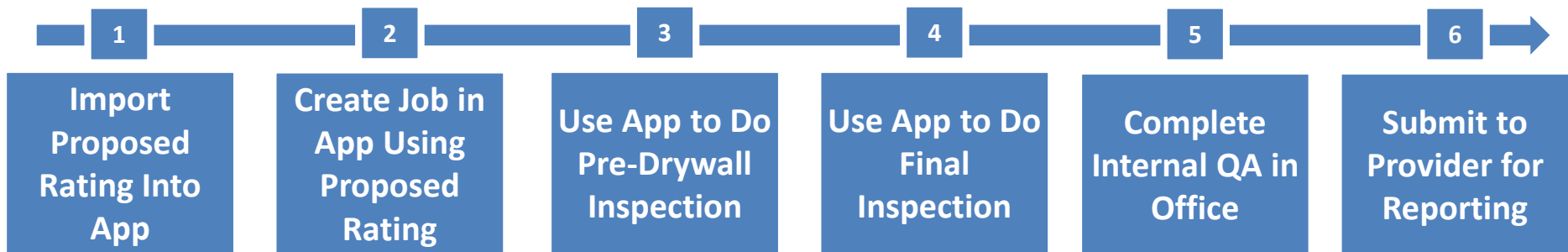- All info is automatically synced when you finish.

A Better Way

1	2	3	4	5
Import Proposed Rating Into App	**Create Job in App Using Proposed Rating**	**Use App to Do Pre-Drywall Inspection**	**Use App to Do Final Inspection**	**Complete Internal QA in Office**

- Jobs can be tagged for internal QA.

- Updated HERS rating file can be generated with the press of a button.

A Better Way

1	2	3	4	5	6
Import Proposed Rating Into App	Create Job in App Using Proposed Rating	Use App to Do Pre-Drywall Inspection	Use App to Do Final Inspection	Complete Internal QA in Office	Submit to Provider for Reporting

- Use app to submit job to your Provider.

- Provider completes QA, downloads HERS file, and submits home via HERS software, just like today.

Summary: A Better Way

- More robust record helps demonstrate the value of third-party inspections.

- State of the art technology makes it easier to collect and manage high-quality field data.

ENERGY STAR RaterPRO Tour

ENERGY STAR RaterPRO Tour

Cloud Hosted
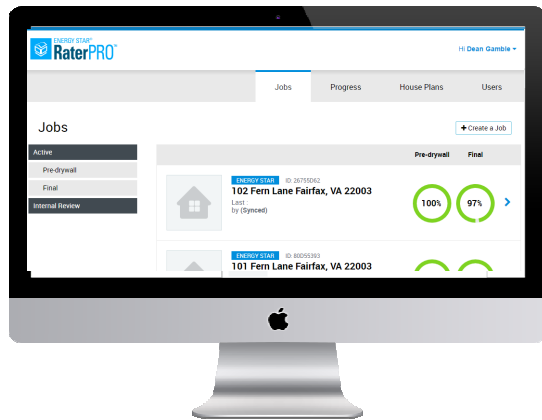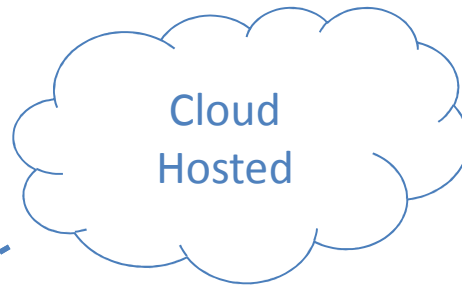
Web-Based Admin Site

Field App

ENERGY STAR RaterPRO Tour
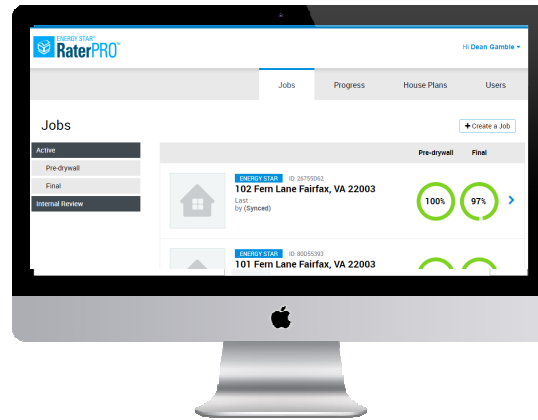
Web-Based Admin Site

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR® RaterPRO™

Hi **Dean Gamble** ▾

| | Jobs | Progress | House Plans | Users |

Create a Job

Rating Type   [ENERGY STAR Rating | HERS Rating Only] ⬅

Sample Set   (⚪) ⬅

House Plan   [**+** Add] ⬅

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR® RaterPRO™

| Jobs | Progress | House Plans | Users |

Job Status

Stage	All Jobs	Stagnant Jobs			
		1 Week	2 Weeks	3 Weeks	4+ Weeks
Active	11	12	13	14	15
Pre-Drywall	10	10	10	10	10
Final	10	10	10	10	10
Completed	10	10	10	10	10
Internal Review	10	10	10	10	10
Submitted to Provider	10	10	10	10	10
Approved	10	10	10	10	10
Registered	10				
Deleted	10				

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR® RaterPRO™

Hi **Dean Gamble** ▾

Jobs | Progress | **House Plans** | Users

House Plans

+ Add a House Plan

Carnation - Bonus   ✎ Edit

Builder: **HVAC Design Report:**
Best Builder
Community: **Rater Design Review Checklist:**
Canterbury Woods

Daisy - Base   ✎ Edit

Builder: **HVAC Design Report:**
Best Builder
Community: **Rater Design Review Checklist:**
Canterbury Woods

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR RaterPRO Tour

Field App

ENERGY STAR RaterPRO Tour: Field App

ENERGY STAR RaterPRO Tour: Field App

ENERGY STAR RaterPRO Tour: Field App

Rough opening around windows & exterior doors sealed

💬 | Builder Verified | Must Correct | Rater Verified

Doors match proposed design ℹ️

Doors

Name	Door Type Name	R-Value of Opaque Area	Wall Assignement	Storm Door?	Opaqu
Front Door	Therma-Tru Fiberglas***	5.30	agwall-1	No	21.0
Garage Door	Steel-polyurethane	2.60	agwall-2	No	21.0

💬 | N/A | Must Correct | Rater Verified

Air sealing at penetrations, with blocking / flashing as needed

💬 | Builder Verified | Must Correct | Rater Verified

Sill plates sealed to foundation / sub-floor, plus gasket beneath

💬 | N/A | Builder Verified | Must Correct | Rater Verified

Garage walls sealed, plus sealed air barrier at floor cavity above

💬 | N/A | Builder Verified | Must Correct | Rater Verified

Gap between common wall and framing sealed

💬 | N/A | Builder Verified | Must Correct | Rater Verified | More ▲

You Are Rating: 🏠 **103 Fern Lane Fairfax, VA 22003**
Builder: Best Builder   House Plan: Daisy

✿EPA

ENERGY STAR RaterPRO Tour: Field App

ENERGY STAR RaterPRO Tour: Field App

Rough opening around windows & exterior doors sealed

| | Builder Verified | Must Correct | Rater Verified |

Doors match proposed design

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Name	Door Type Name	R-Value of Opaque Area	Wall Assignemor	Storm Door?	Opaqu
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Garage Door	Steel-polyurethane	2.60	agwall-2	No	21.0

| N/A | Must Correct | Rater Verified |

Air sealing at penetrations, with blocking / flashing as needed

| | Builder Verified | Must Correct | Rater Verified |

Sill plates sealed to foundation / sub-floor, plus gasket beneath

| N/A | Builder Verified | Must Correct | Rater Verified |

Garage walls sealed, plus sealed air barrier at floor cavity above

| N/A | Builder Verified | Must Correct | Rater Verified |

Gap between common wall and framing sealed

| N/A | Builder Verified | Must | Rater |

More

You Are Rating: 103 Fern Lane Fairfax, VA 22003
Builder: Best Builder   House Plan: Daisy

ENERGY STAR RaterPRO Tour: Field App

Rough opening around windows & exterior doors sealed

ⓘ

| Builder Verified | Must Correct | Rater Verified |

Doors match proposed design ⓘ

Doors

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ⓘ

| Builder Verified | Must Correct | Rater Verified |

Sill plates sealed to foundation / sub-floor, plus gasket beneath

ⓘ

| N/A | Builder Verified | Must Correct | Rater Verified |

Garage walls sealed, plus sealed air barrier at floor cavity above

ⓘ

| N/A | Builder Verified | Must Correct | Rater Verified |

Gap between common wall and framing sealed

| N/A | Builder Verified | Must Correct | Rater Verified |

More ▲

You Are Rating: 🏠   **103 Fern Lane Fairfax, VA 22003**
Builder: Best Builder   House Plan: Daisy

47

ENERGY STAR RaterPRO Tour: Field App

ENERGY STAR RaterPRO Tour: Admin Site

ENERGY STAR RaterPRO Tour: Key Features

- Cloud-based, but with the ability to work offline

- Able to import proposed ratings from HERS software

- Able to export confirmed ratings back to HERS software

- Capable of capturing robust data: notes, photos, geolocation

- Talks to Retrotec and TEC apps for connected devices

- Can generate builder reports showing progress and trends

- Freely available

ENERGY STAR RaterPRO
Demo

Next Steps

Next Steps

- Internal testing through Spring.

- Beta testing begins in the Summer.

- Beta testing ends in Fall, and used to improve RaterPRO.

- If beta testing goes well, Version 1.0 by next RESNET.

- Upon release, RaterPRO will be completely voluntary.

- Going forward, work with RESNET to develop standards and credit for enhanced ratings. RaterPRO may be a model, but isn't designed to be the only solution.

Q&A

ENERGY STAR Certified Homes

Web & Email:

Main: www.energystar.gov/newhomespartners
Technical: www.energystar.gov/newhomesguidelines
Training: www.energystar.gov/newhomestraining
HVAC: www.energystar.gov/newhomesHVAC
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