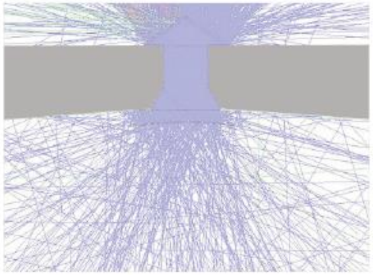
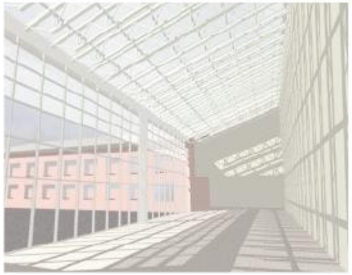
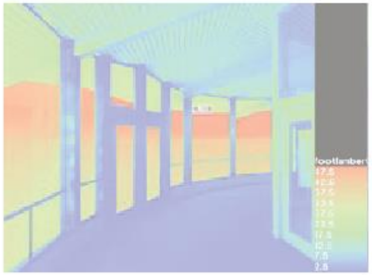
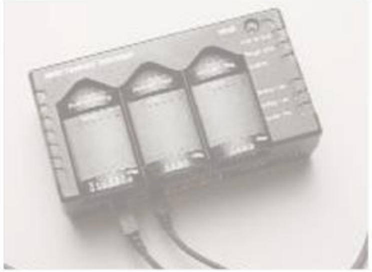
ARCHITECTURAL ENERGY

CORPORATION



ARCHITECTURAL ENERGY CORPORATION



footlambert



REM/*Rate* Advanced Training

RESNET 2013

V. Robert Salcido, P.E., Director of REM Programs

Brian Christensen, HERS & LEED-H Green Rater, Senior Engineer

Architectural Energy Corporation

February 26, 2013

Improving building performance since 1982

INTRODUCTION

- V. Robert Salcido
  - Director of REM Programs
  - Background in Environmental and Civil Engineering
  - 20 years experience in energy and building science

- Brian Christensen
  - Background in Physics and Mechanical Engineering
  - 19 years experience in solar energy and building science (including 8 years of HERS Ratings)

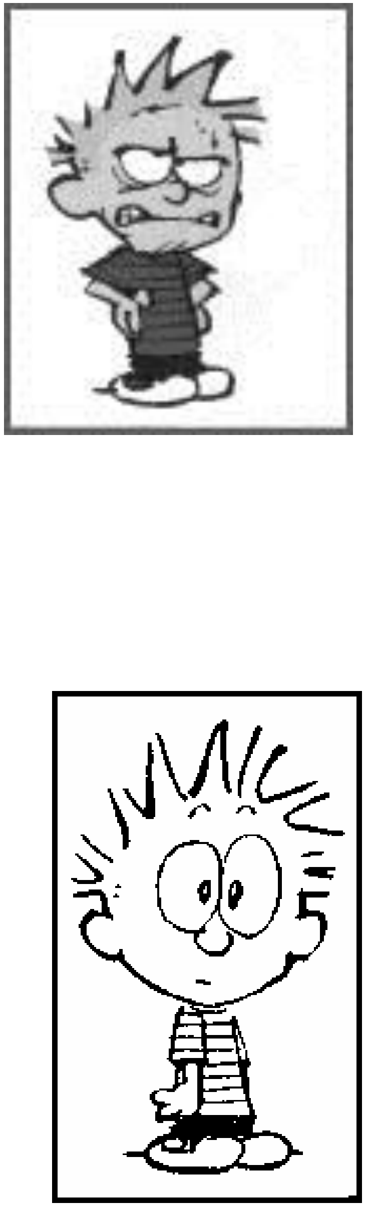
INTRODUCTION

Job Description

Tinhamodic

OVERVIEW

- REM/Rate Installation
  - Installation
  - REM Files
- New Features
  - Interface Changes
  - Tax Credit Extension (13-001)
  - Lights and Appliances screen
  - Sampled File Generator
  - RESNET Registry Upload
  - New Reporting Tool
  - ENERGY STAR v3.0 Label
- Printing/Data Output
  - Quick Analysis
  - Multi-Building Reporting
  - Report Grouping
  - Logos
  - Graphs
  - Print Permissions
  - Data Export
- Libraries
  - File Opening
  - Temporary Libraries
  - Library Sets and Transfer
  - Sorting
- Analysis
  - Improvement Analysis
  - User Defined Reference Home
  - Batching
  - Utility Bill Disaggregation
- Technical
  - Cond vs Uncond Foundations
  - Sealed Attics
  - Thermal Boundaries
  - Utility Rates
  - Integrated Systems
  - GSHP
- Tricks
  - Equation Solver
  - Tabs
  - Docking Panes
  - Reset Window Layout
  - Default Building
  - Window Rotation
  - Registration
- Options
  - Binding Adjustments
  - Home Energy Ratings
  - IECC
  - Tax Credits
  - EPA / ENERGY STAR
  - Input Mode
- Discussion
- Q & A



COURAGE

COURAGE
Do one brave thing today... run like hell tommorow
FunnyDemotivationalPosters.com

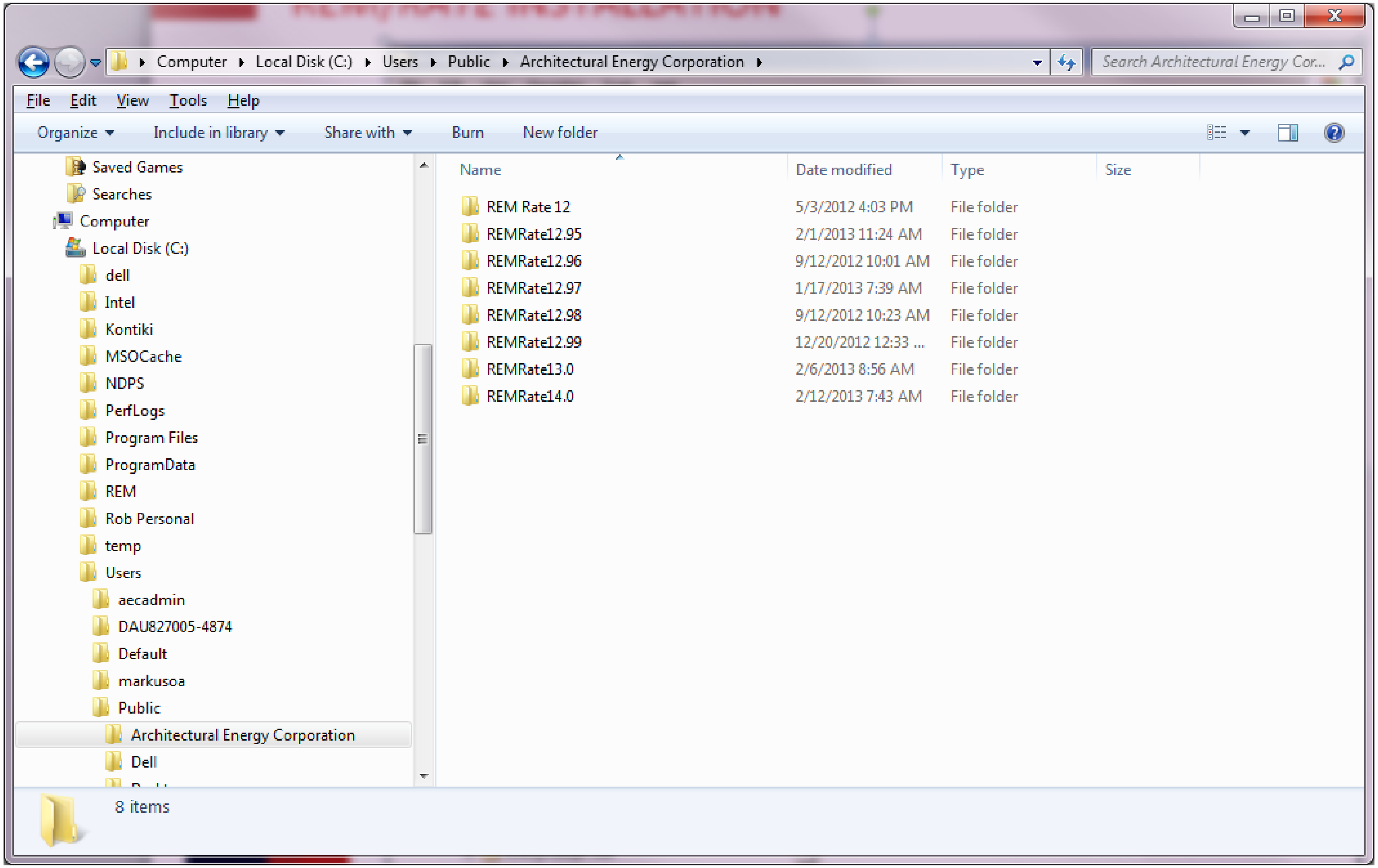
REM/*RATE* INSTALLATION

Two Installations

- Updater – updates REM/*Rate* executable file but does not overwrite libraries or building files.
- Full Install - if installed in an existing REM/*Rate* folder, then it will overwrite everything.

Having multiple REM/Rate versions on your computer is possible.

REM/*RATE* INSTALLATION


Computer ▸ Local Disk (C:) ▸ Users ▸ Public ▸ Architectural Energy Corporation ▸
Search Architectural Energy Cor...
File Edit View Tools Help
Organize ▾ Include in library ▾ Share with ▾ Burn New folder
Saved Games
Searches
Computer
Local Disk (C:)
dell
Intel
Kontiki
MSOCache
NDPS
PerfLogs
Program Files
ProgramData
REM
Rob Personal
temp
Users
aecadmin
DAU827005-4874
Default
markusoa
Public
Architectural Energy Corporation
Dell
8 items

Name	Date modified	Type	Size
REM Rate 12	5/3/2012 4:03 PM	File folder	
REMRate12.95	2/1/2013 11:24 AM	File folder	
REMRate12.96	9/12/2012 10:01 AM	File folder	
REMRate12.97	1/17/2013 7:39 AM	File folder	
REMRate12.98	9/12/2012 10:23 AM	File folder	
REMRate12.99	12/20/2012 12:33 ...	File folder	
REMRate13.0	2/6/2013 8:56 AM	File folder	
REMRate14.0	2/12/2013 7:43 AM	File folder	

TEAMWORK – REM TEAM

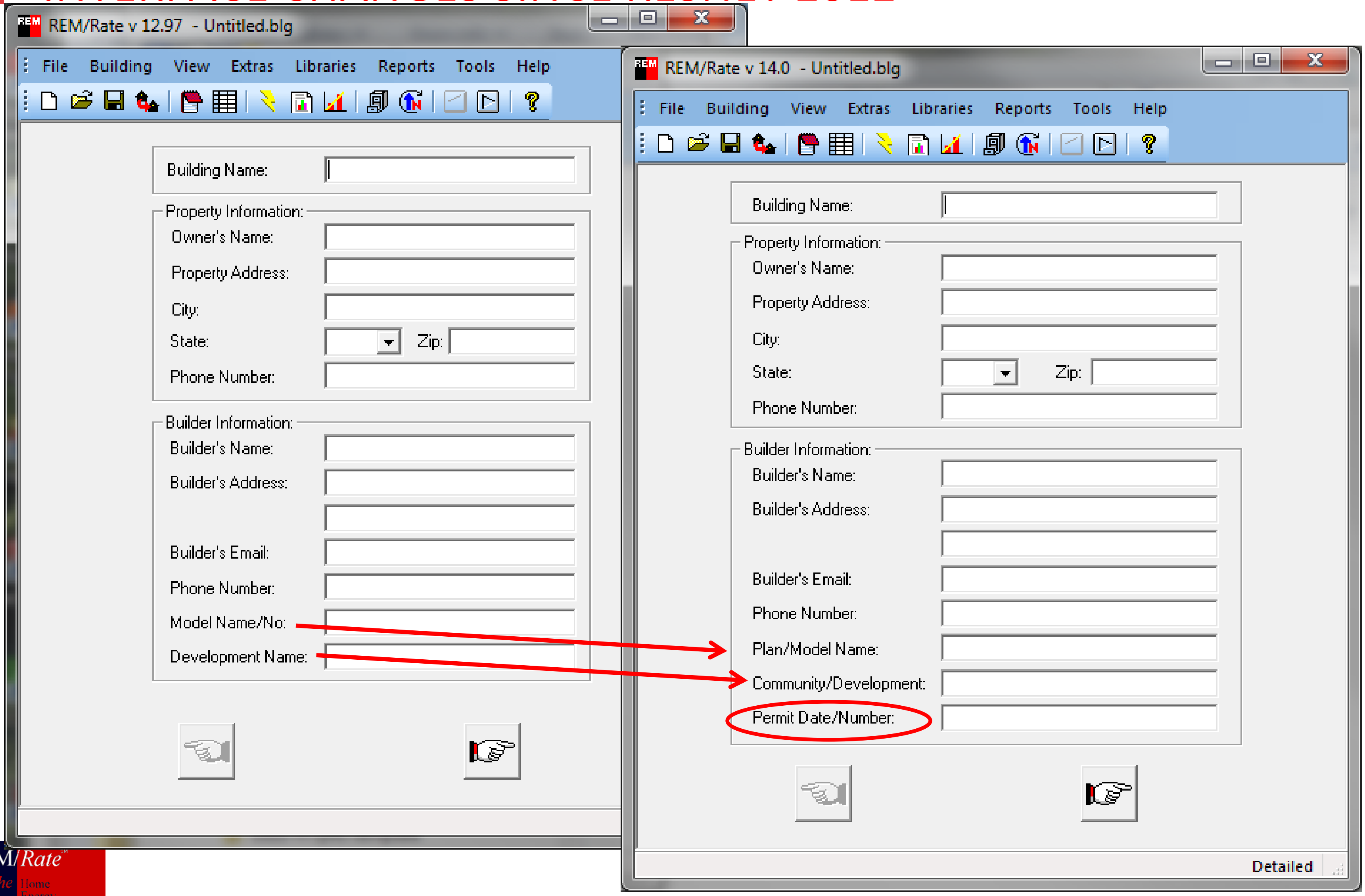
TEAMWORK
Share Victory. Share Defeat.

REM/Rate™
The Home Energy Rating Tool

NEW FEATURES

- Interface Changes
- Tax Credit (13-001)
- Lights and Appliances Screen
- Sampled File Generator
- DOE Challenge Home Requirements Screen
- RESNET Registry Upload
- New Reporting Tool

INTERFACE CHANGES SINCE RESNET 2012



REM/Rate v 12.97 - Untitled.blg

Building Name:

Property Information:
Owner's Name:
Property Address:
City:
State:
Zip:
Phone Number:

Builder Information:
Builder's Name:
Builder's Address:
Builder's Email:
Phone Number:
Model Name/No:
Development Name:

REM/Rate v 14.0 - Untitled.blg

Building Name:

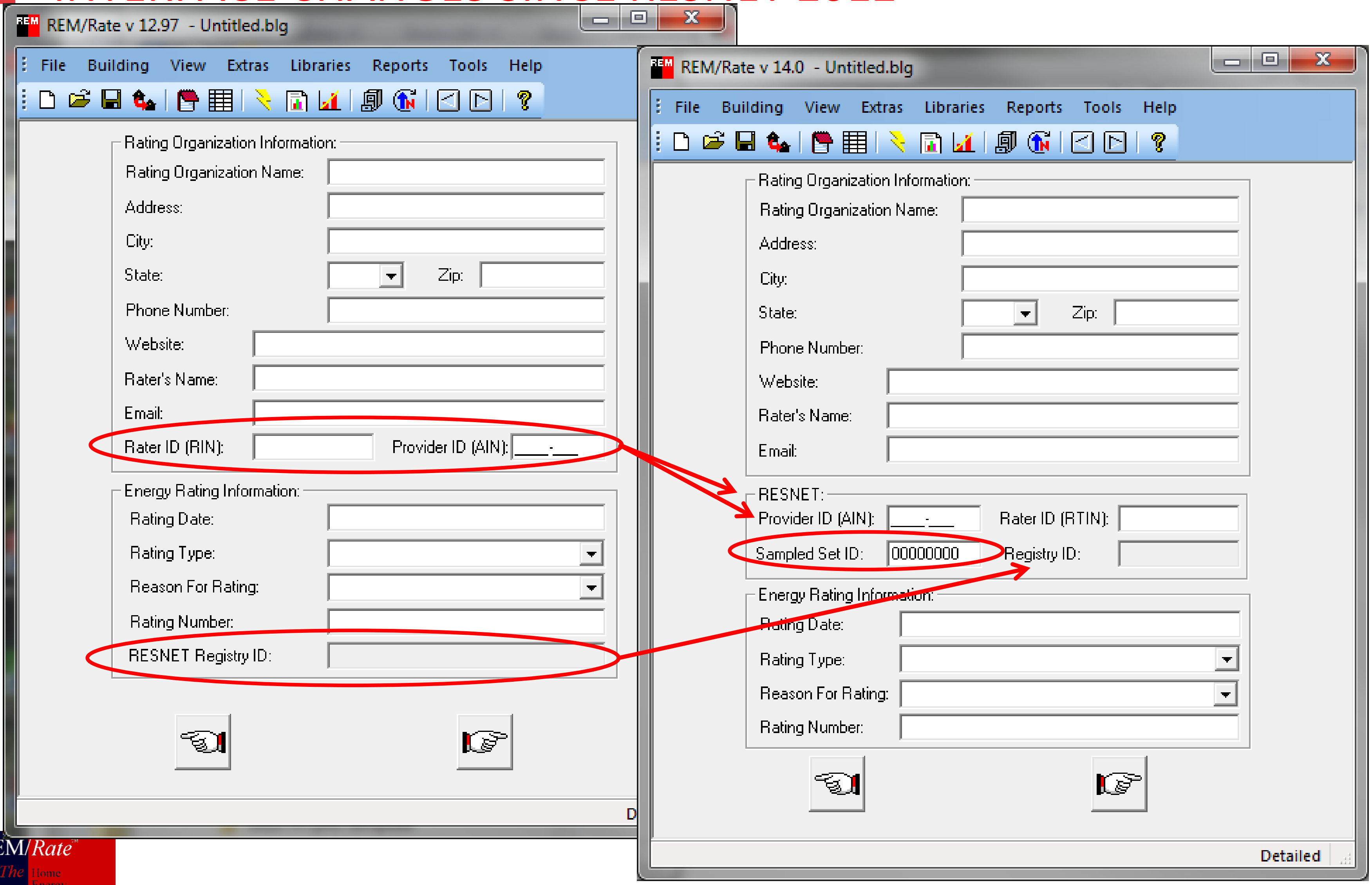
Property Information:
Owner's Name:
Property Address:
City:
State:
Zip:
Phone Number:

Builder Information:
Builder's Name:
Builder's Address:
Builder's Email:
Phone Number:
Plan/Model Name:
Community/Development:
Permit Date/Number:

Detailed

REM/Rate™
The Home Energy Rating Tool

INTERFACE CHANGES SINCE RESNET 2012



REM/Rate v 12.97 - Untitled.blg
File Building View Extras Libraries Reports Tools Help

Rating Organization Information:
Rating Organization Name:
Address:
City:
State: Zip:
Phone Number:
Website:
Rater's Name:
Email:
Rater ID (RIN): Provider ID (AIN): ___-___

Energy Rating Information:
Rating Date:
Rating Type:
Reason For Rating:
Rating Number:
RESNET Registry ID:

REM/Rate v 14.0 - Untitled.blg
File Building View Extras Libraries Reports Tools Help

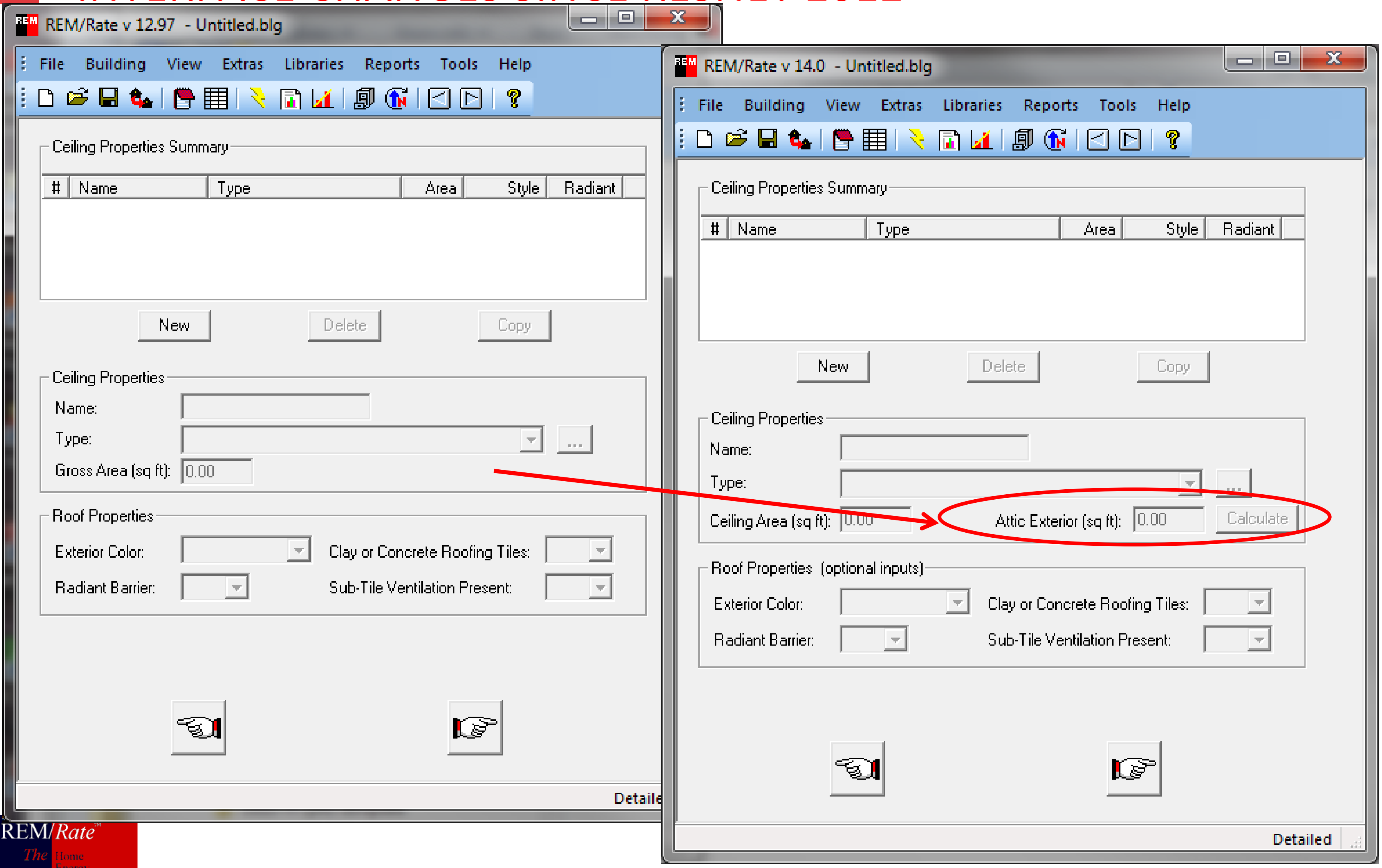
Rating Organization Information:
Rating Organization Name:
Address:
City:
State: Zip:
Phone Number:
Website:
Rater's Name:
Email:

RESNET:
Provider ID (AIN): ___-___ Rater ID (RTIN):
Sampled Set ID: 00000000 Registry ID:

Energy Rating Information:
Rating Date:
Rating Type:
Reason For Rating:
Rating Number:

REM/Rate™
The Home Energy Rating Tool

INTERFACE CHANGES SINCE RESNET 2012



File
Building
View
Extras
Libraries
Reports
Tools
Help
New
Delete
Copy
Calculate

REM/Rate v 12.97 - Untitled.blg

Ceiling Properties Summary

#	Name	Type	Area	Style	Radiant

Ceiling Properties

Name:

Type:

Gross Area (sq ft): 0.00

Roof Properties

Exterior Color:

Clay or Concrete Roofing Tiles:

Radiant Barrier:

Sub-Tile Ventilation Present:

Detaile

REM/Rate v 14.0 - Untitled.blg

Ceiling Properties Summary

#	Name	Type	Area	Style	Radiant

Ceiling Properties

Name:

Type:

Ceiling Area (sq ft): 0.00

Attic Exterior (sq ft): 0.00

Roof Properties (optional inputs)

Exterior Color:

Clay or Concrete Roofing Tiles:

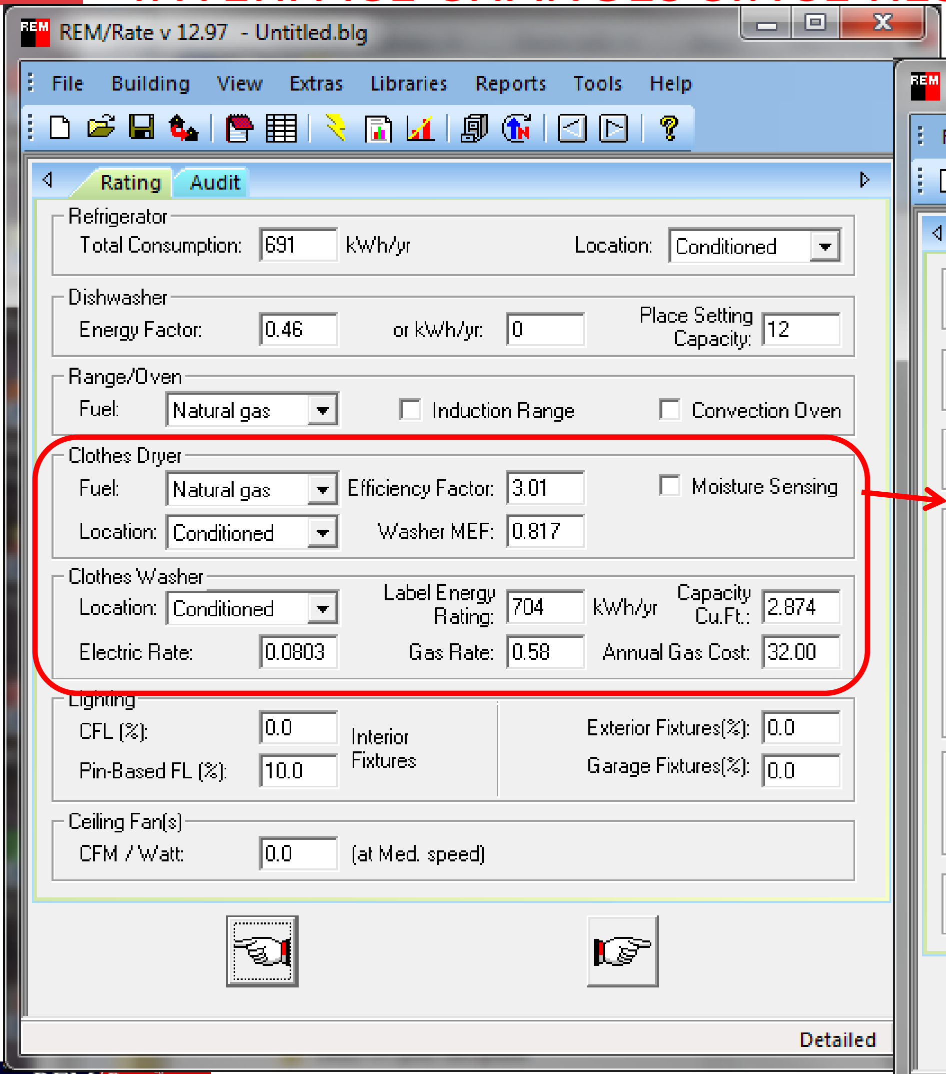
Radiant Barrier:

Sub-Tile Ventilation Present:

Detailed

REM/Rate™
The Home Energy Rating Tool

INTERFACE CHANGES SINCE RESNET 2012


REM/Rate v 12.97 - Untitled.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help
Rating
Audit
Detailed

Refrigerator
Total Consumption: 691 kWh/yr
Location: Conditioned

Dishwasher
Energy Factor: 0.46
or kWh/yr: 0
Place Setting Capacity: 12

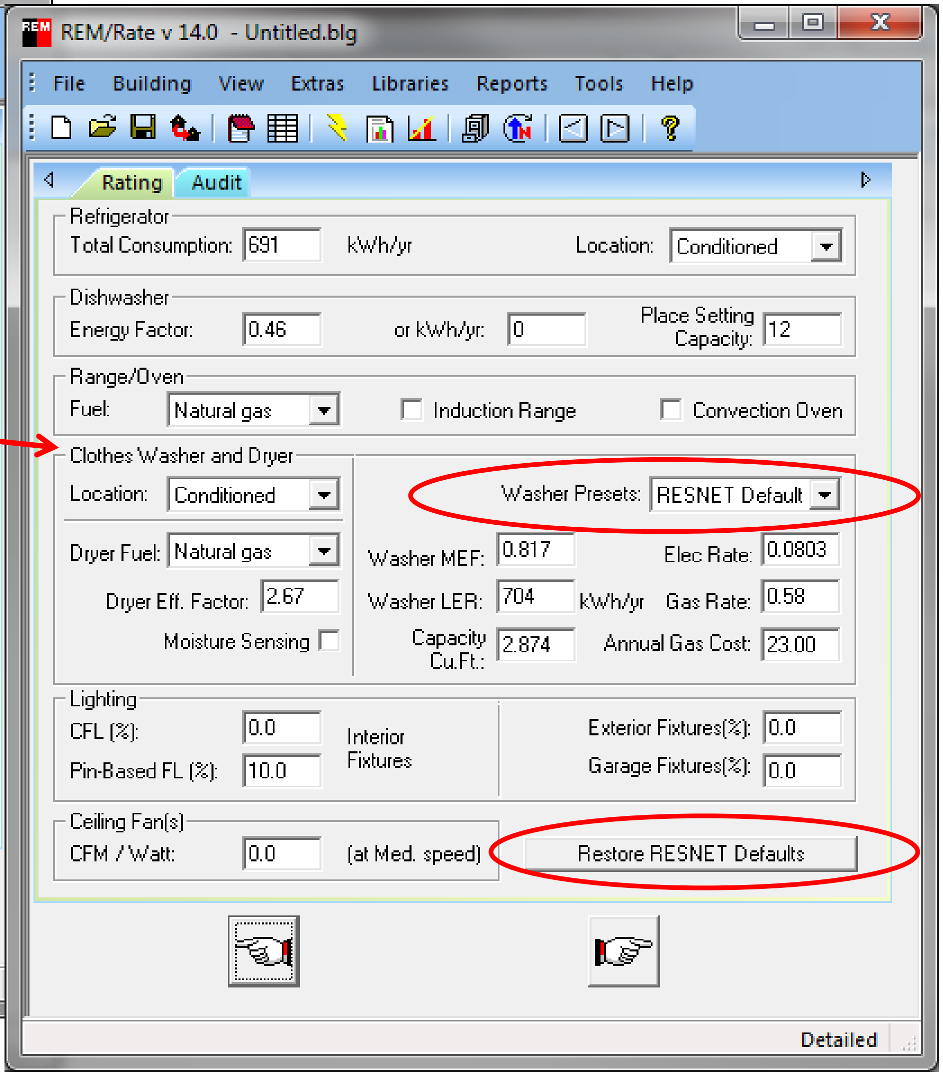
Range/Oven
Fuel: Natural gas
☐ Induction Range
☐ Convection Oven

Clothes Dryer
Fuel: Natural gas
Efficiency Factor: 3.01
☐ Moisture Sensing
Location: Conditioned
Washer MEF: 0.817

Clothes Washer
Location: Conditioned
Label Energy Rating: 704 kWh/yr
Capacity Cu.Ft.: 2.874
Electric Rate: 0.0803
Gas Rate: 0.58
Annual Gas Cost: 32.00

Lighting
CFL (%): 0.0
Pin-Based FL (%): 10.0
Interior Fixtures
Exterior Fixtures(%): 0.0
Garage Fixtures(%): 0.0

Ceiling Fan(s)
CFM / Watt: 0.0 (at Med. speed)


REM/Rate v 14.0 - Untitled.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help
Rating
Audit
Restore RESNET Defaults
Detailed

Refrigerator
Total Consumption: 691 kWh/yr
Location: Conditioned

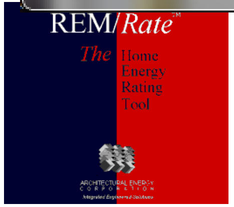
Dishwasher
Energy Factor: 0.46
or kWh/yr: 0
Place Setting Capacity: 12

Range/Oven
Fuel: Natural gas
☐ Induction Range
☐ Convection Oven

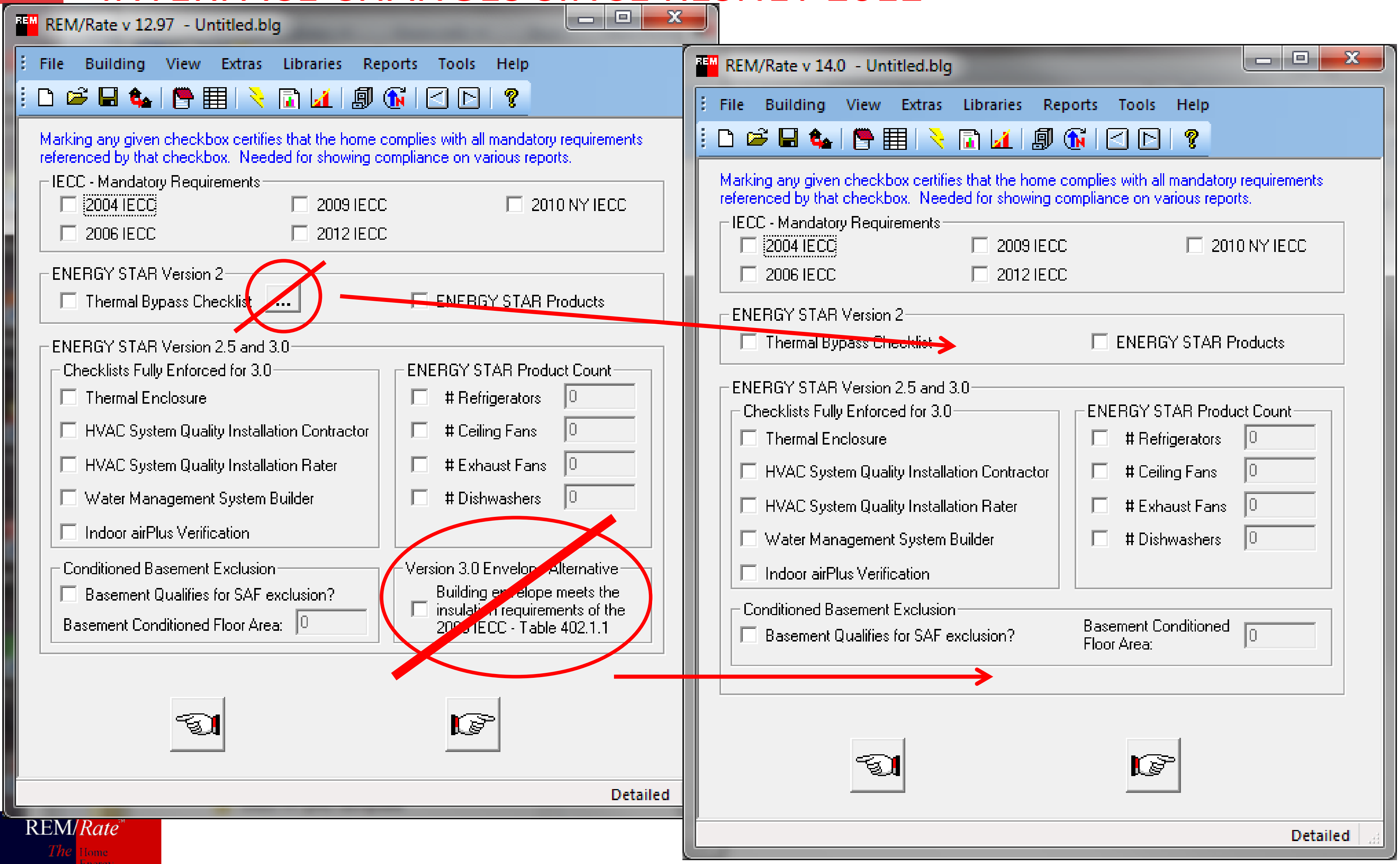
Clothes Washer and Dryer
Location: Conditioned
Washer Presets: RESNET Default
Dryer Fuel: Natural gas
Washer MEF: 0.817
Elec Rate: 0.0803
Dryer Eff. Factor: 2.67
Washer LER: 704 kWh/yr
Gas Rate: 0.58
Moisture Sensing ☐
Capacity Cu.Ft.: 2.874
Annual Gas Cost: 23.00

Lighting
CFL (%): 0.0
Pin-Based FL (%): 10.0
Interior Fixtures
Exterior Fixtures(%): 0.0
Garage Fixtures(%): 0.0

Ceiling Fan(s)
CFM / Watt: 0.0 (at Med. speed)


REM/Rate
The Home Energy Rating Tool
ARCHITECTURAL ENERGY CORPORATION

INTERFACE CHANGES SINCE RESNET 2012



REM/Rate v 12.97 - Untitled.blg

Marking any given checkbox certifies that the home complies with all mandatory requirements referenced by that checkbox. Needed for showing compliance on various reports.

IECC - Mandatory Requirements

☐ 2004 IECC
☐ 2009 IECC
☐ 2010 NY IECC
☐ 2006 IECC
☐ 2012 IECC

ENERGY STAR Version 2

☐ Thermal Bypass Checklist ...
☐ ENERGY STAR Products

ENERGY STAR Version 2.5 and 3.0

Checklists Fully Enforced for 3.0

☐ Thermal Enclosure
☐ HVAC System Quality Installation Contractor
☐ HVAC System Quality Installation Rater
☐ Water Management System Builder
☐ Indoor airPlus Verification

ENERGY STAR Product Count

☐ # Refrigerators: 0
☐ # Ceiling Fans: 0
☐ # Exhaust Fans: 0
☐ # Dishwashers: 0

Conditioned Basement Exclusion

☐ Basement Qualifies for SAF exclusion?

Basement Conditioned Floor Area: 0

Version 3.0 Envelope Alternative

☐ Building envelope meets the insulation requirements of the 2009 IECC - Table 402.1.1

REM/Rate v 14.0 - Untitled.blg

Marking any given checkbox certifies that the home complies with all mandatory requirements referenced by that checkbox. Needed for showing compliance on various reports.

IECC - Mandatory Requirements

☐ 2004 IECC
☐ 2009 IECC
☐ 2010 NY IECC
☐ 2006 IECC
☐ 2012 IECC

ENERGY STAR Version 2

☐ Thermal Bypass Checklist
☐ ENERGY STAR Products

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ENERGY STAR Product Count

☐ # Refrigerators: 0
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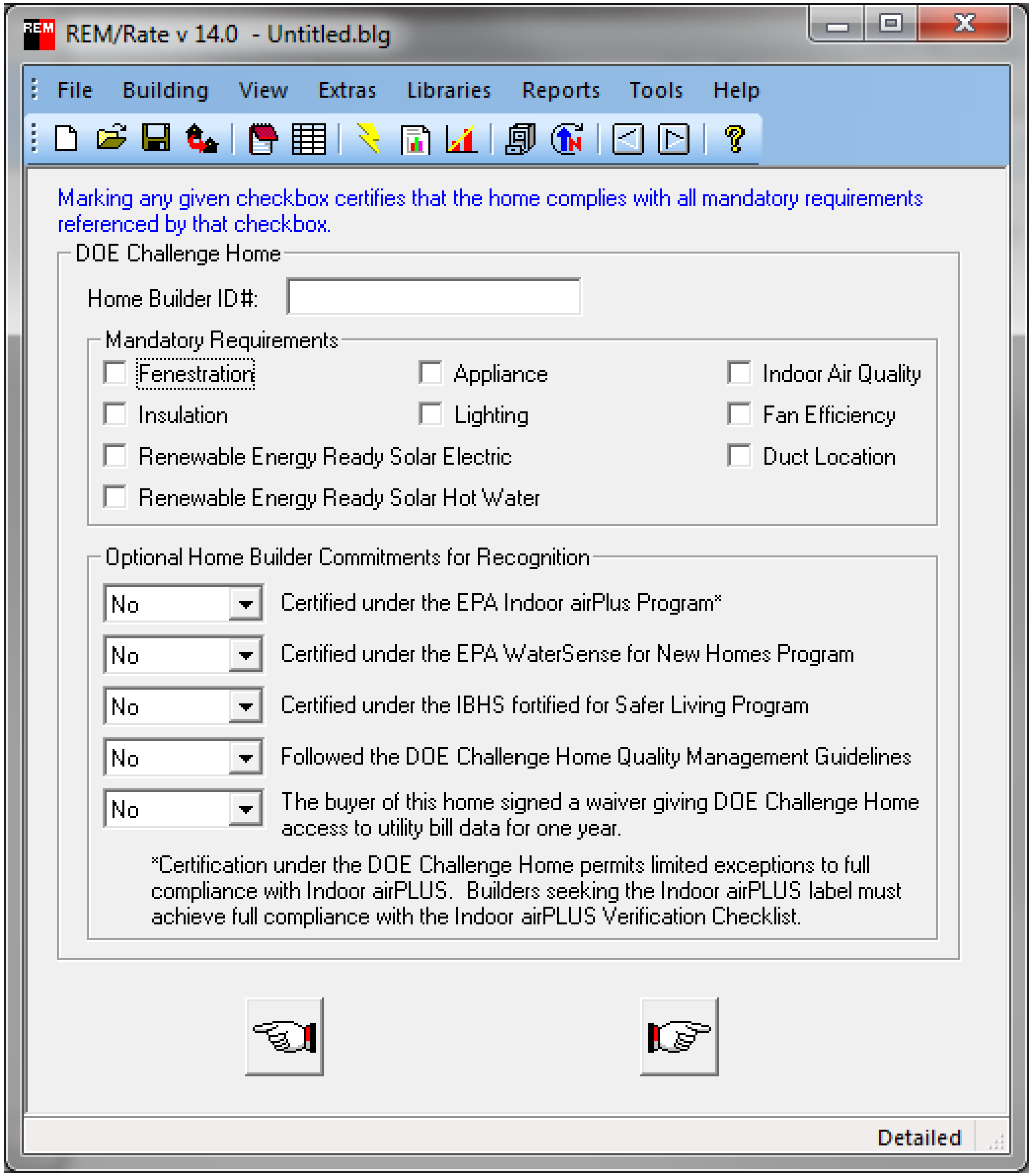
☐ # Dishwashers: 0

Conditioned Basement Exclusion

☐ Basement Qualifies for SAF exclusion?

Basement Conditioned Floor Area: 0

INTERFACE CHANGES SINCE RESNET 2012



Marking any given checkbox certifies that the home complies with all mandatory requirements referenced by that checkbox.

DOE Challenge Home

Home Builder ID#:

Mandatory Requirements

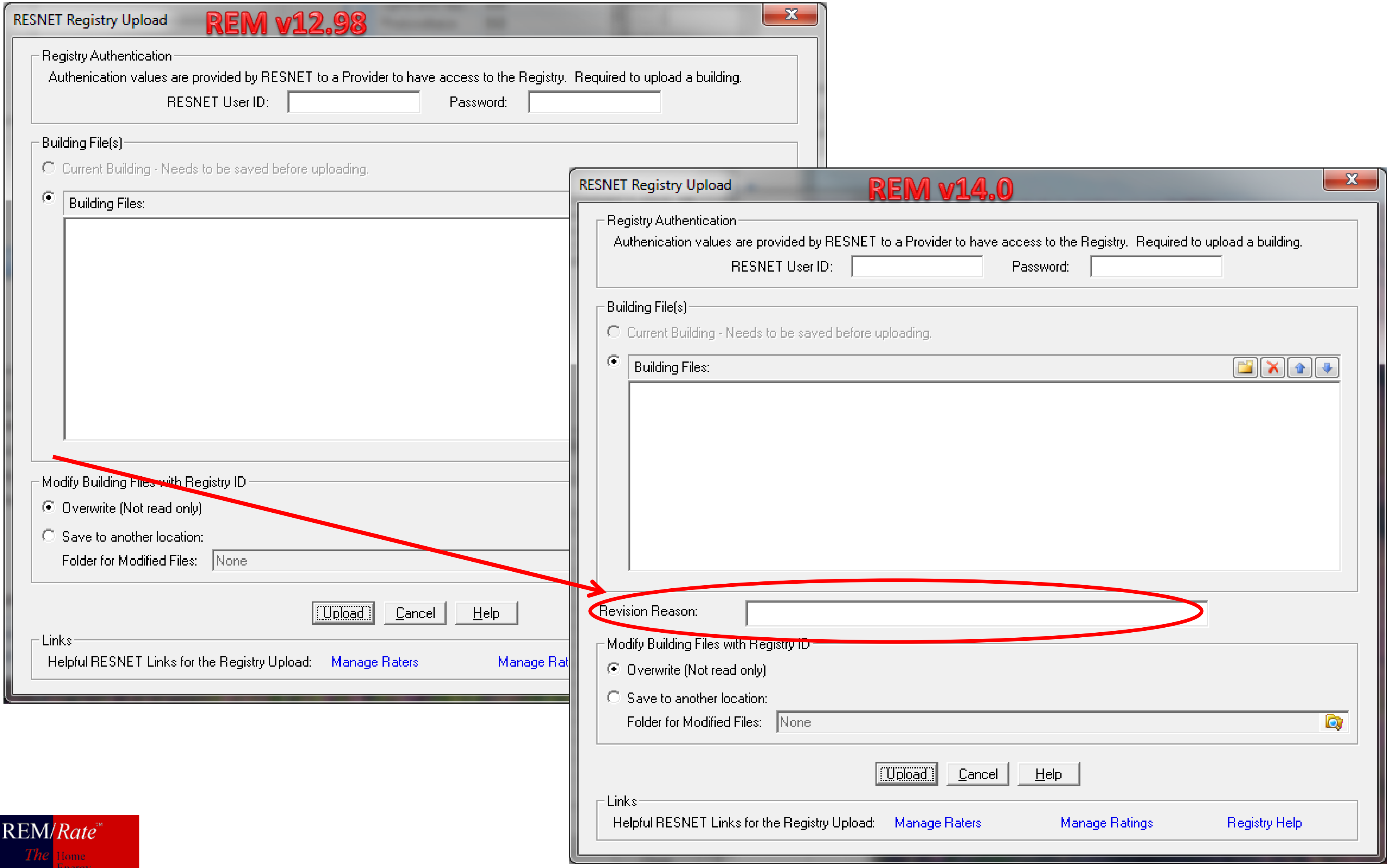
☐ Fenestration
☐ Insulation
☐ Renewable Energy Ready Solar Electric
☐ Renewable Energy Ready Solar Hot Water
☐ Appliance
☐ Lighting
☐ Indoor Air Quality
☐ Fan Efficiency
☐ Duct Location

Optional Home Builder Commitments for Recognition

No	Certified under the EPA Indoor airPlus Program*
No	Certified under the EPA WaterSense for New Homes Program
No	Certified under the IBHS fortified for Safer Living Program
No	Followed the DOE Challenge Home Quality Management Guidelines
No	The buyer of this home signed a waiver giving DOE Challenge Home access to utility bill data for one year.

*Certification under the DOE Challenge Home permits limited exceptions to full compliance with Indoor airPLUS. Builders seeking the Indoor airPLUS label must achieve full compliance with the Indoor airPLUS Verification Checklist.

INTERFACE CHANGES SINCE RESNET 2012



REM v12.98

RESNET Registry Upload

Registry Authentication

Authenication values are provided by RESNET to a Provider to have access to the Registry. Required to upload a building.

RESNET User ID: Password:

Building File(s)

○ Current Building - Needs to be saved before uploading.

● Building Files:

Modify Building Files with Registry ID

● Overwrite (Not read only)

○ Save to another location:

Folder for Modified Files: None

Links

Helpful RESNET Links for the Registry Upload: Manage Raters Manage Rat

REM v14.0

RESNET Registry Upload

Registry Authentication

Authenication values are provided by RESNET to a Provider to have access to the Registry. Required to upload a building.

RESNET User ID: Password:

Building File(s)

○ Current Building - Needs to be saved before uploading.

● Building Files:

Revision Reason:

Modify Building Files with Registry ID

● Overwrite (Not read only)

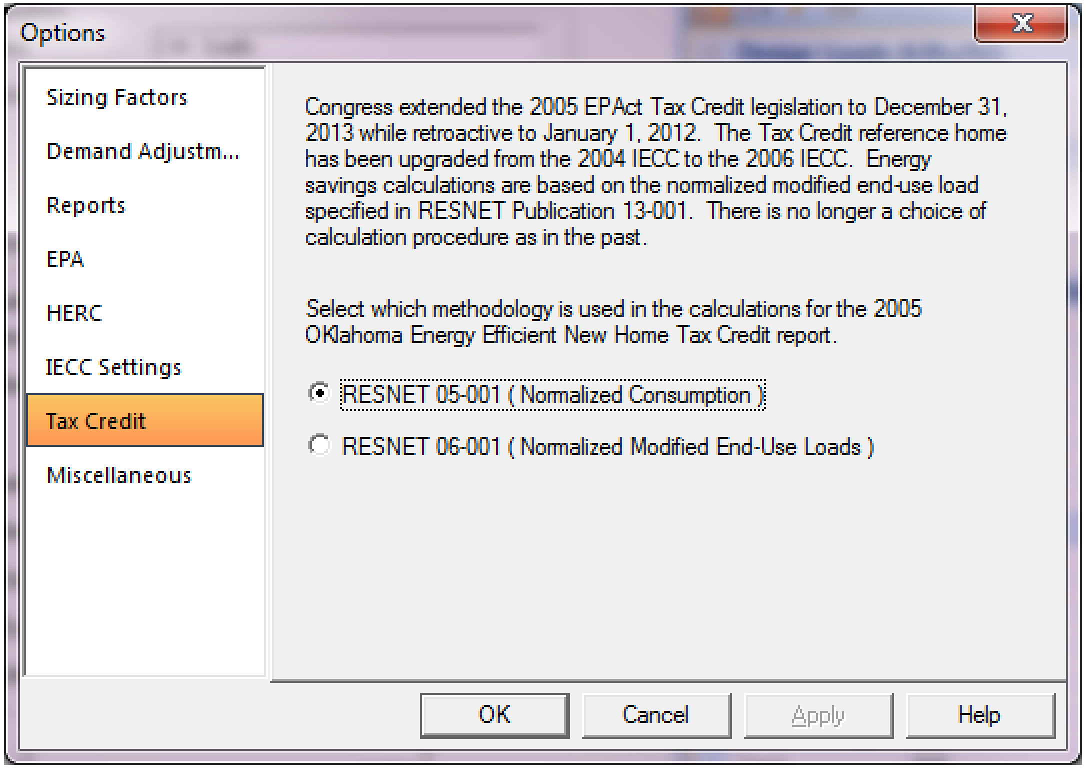
○ Save to another location:

Folder for Modified Files: None

Links

Helpful RESNET Links for the Registry Upload: Manage Raters Manage Ratings Registry Help

NEW FEATURES – TAX CREDIT (13-001)


Options
Sizing Factors
Demand Adjustm...
Reports
EPA
HERC
IECC Settings
Tax Credit
Miscellaneous
OK
Cancel
Apply
Help

Congress extended the 2005 EPAct Tax Credit legislation to December 31, 2013 while retroactive to January 1, 2012. The Tax Credit reference home has been upgraded from the 2004 IECC to the 2006 IECC. Energy savings calculations are based on the normalized modified end-use load specified in RESNET Publication 13-001. There is no longer a choice of calculation procedure as in the past.

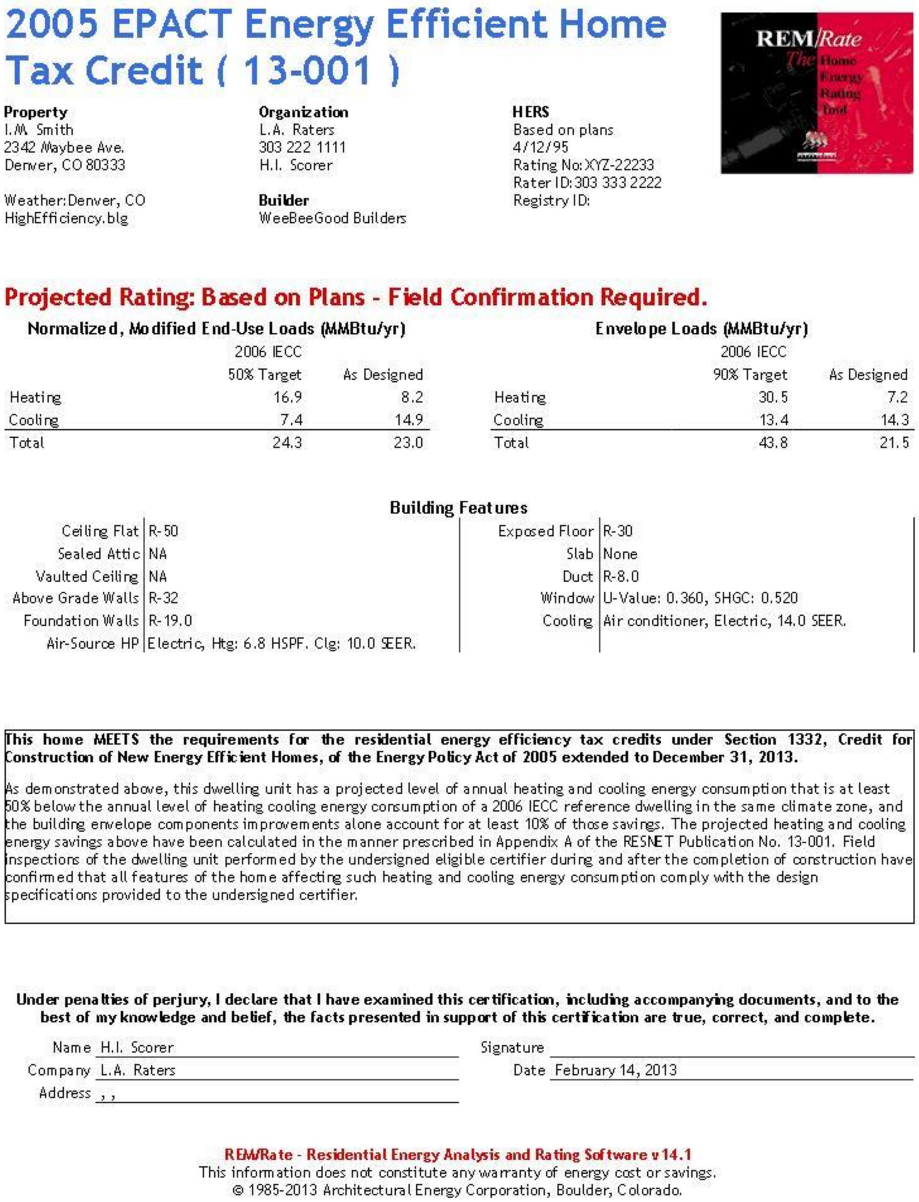
Select which methodology is used in the calculations for the 2005 OKlahoma Energy Efficient New Home Tax Credit report.

● RESNET 05-001 (Normalized Consumption)

○ RESNET 06-001 (Normalized Modified End-Use Loads)

REM/Rate™ The Home Energy Rating Tool

NEW FEATURES – TAX CREDIT (13-001)



2005 EPACT Energy Efficient Home Tax Credit (13-001)

Property I.M. Smith 2342 Maybee Ave. Denver, CO 80333	**Organization** L.A. Raters 303 222 1111 H.I. Scorer	**HERS** Based on plans 4/12/95 Rating No: XYZ-22233 Rater ID: 303 333 2222 Registry ID:
Weather: Denver, CO HighEfficiency.blg	**Builder** WeeBeeGood Builders	

Projected Rating: Based on Plans - Field Confirmation Required.

Normalized, Modified End-Use Loads (MMBtu/yr)

	2006 IECC 50% Target	As Designed
Heating	16.9	8.2
Cooling	7.4	14.9
Total	24.3	23.0

Envelope Loads (MMBtu/yr)

	2006 IECC 90% Target	As Designed
Heating	30.5	7.2
Cooling	13.4	14.3
Total	43.8	21.5

Building Features

Ceiling Flat	R-50	Exposed Floor	R-30
Sealed Attic	NA	Slab	None
Vaulted Ceiling	NA	Duct	R-8.0
Above Grade Walls	R-32	Window	U-Value: 0.360, SHGC: 0.520
Foundation Walls	R-19.0	Cooling	Air conditioner, Electric, 14.0 SEER.
Air-Source HP	Electric, Htg: 6.8 HSPF. Clg: 10.0 SEER.		

This home MEETS the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005 extended to December 31, 2013.

As demonstrated above, this dwelling unit has a projected level of annual heating and cooling energy consumption that is at least 50% below the annual level of heating cooling energy consumption of a 2006 IECC reference dwelling in the same climate zone, and the building envelope components improvements alone account for at least 10% of those savings. The projected heating and cooling energy savings above have been calculated in the manner prescribed in Appendix A of the RESNET Publication No. 13-001. Field inspections of the dwelling unit performed by the undersigned eligible certifier during and after the completion of construction have confirmed that all features of the home affecting such heating and cooling energy consumption comply with the design specifications provided to the undersigned certifier.

Under penalties of perjury, I declare that I have examined this certification, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this certification are true, correct, and complete.

Name H.I. Scorer

Company L.A. Raters

Address , ,

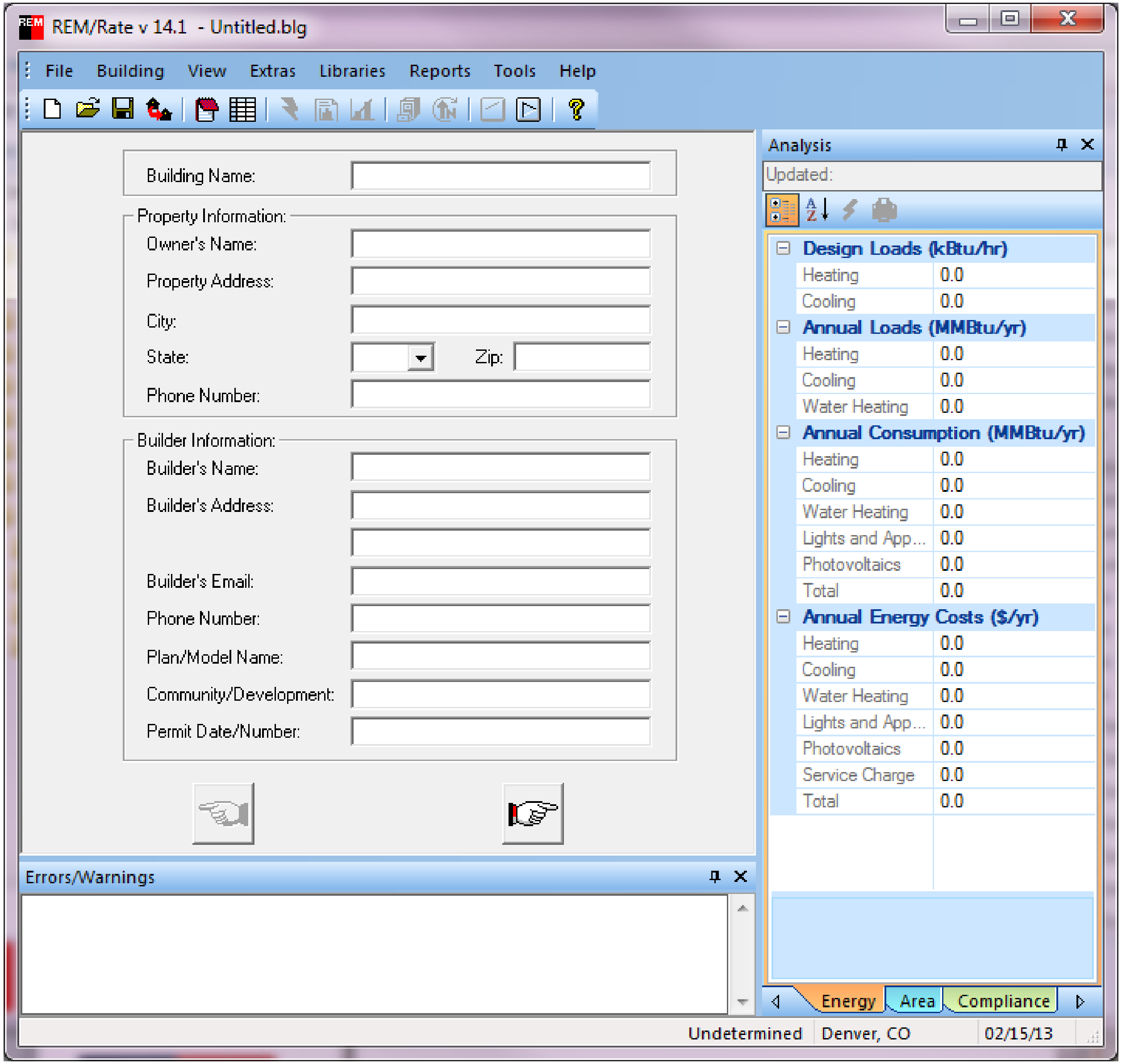
Signature

Date February 14, 2013

REM/Rate - Residential Energy Analysis and Rating Software v 14.1

This information does not constitute any warranty of energy cost or savings.
© 1985-2013 Architectural Energy Corporation, Boulder, Colorado.

NEW FEATURES – SAMPLE FILE GENERATOR


REM/Rate v 14.1 - Untitled.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help

Building Name:

Property Information:

Owner's Name:

Property Address:

City:

State:

Zip:

Phone Number:

Builder Information:

Builder's Name:

Builder's Address:

Builder's Email:

Phone Number:

Plan/Model Name:

Community/Development:

Permit Date/Number:

Errors/Warnings

Analysis

Updated:

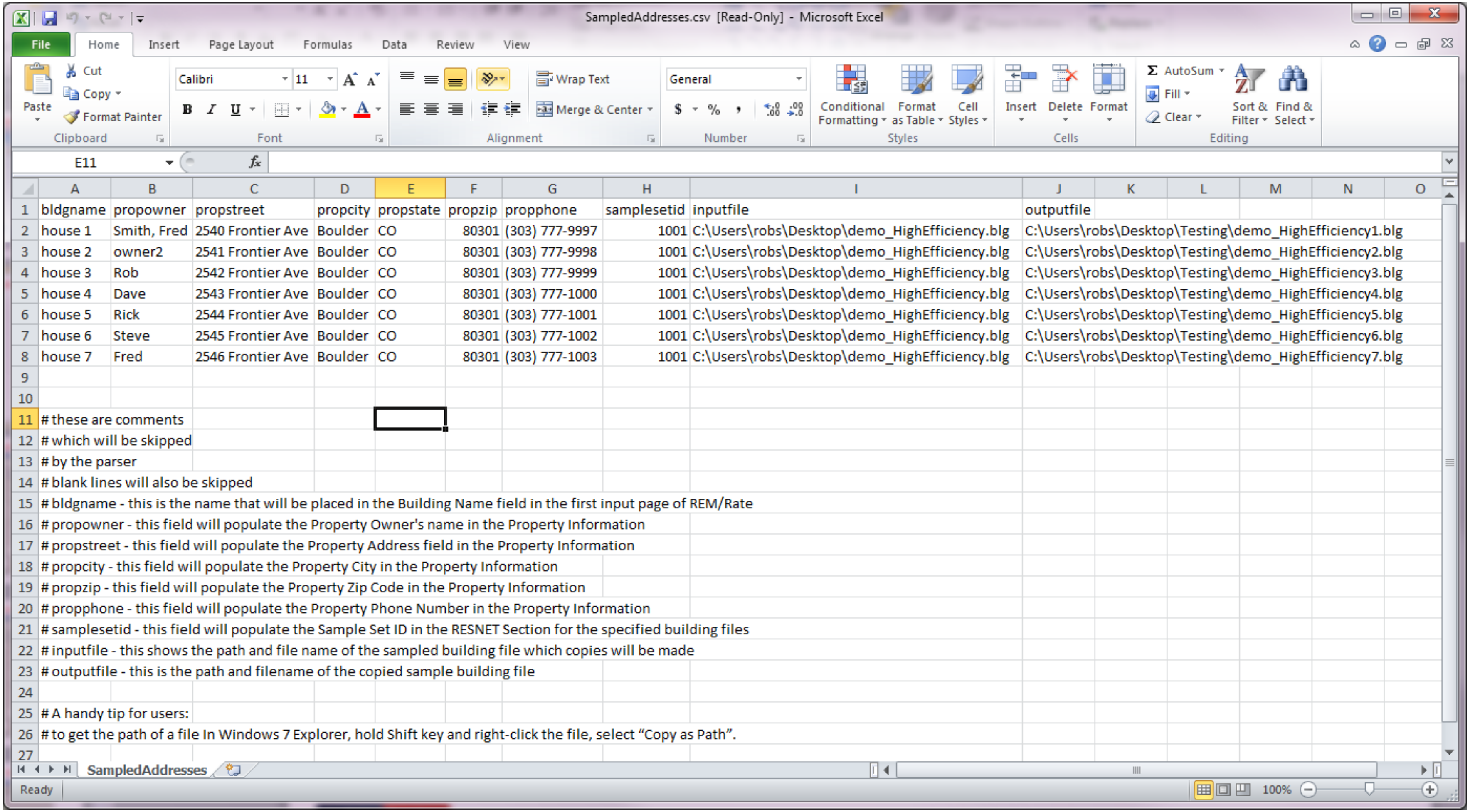
Design Loads (kBtu/hr)	
Heating	0.0
Cooling	0.0
Annual Loads (MMBtu/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Annual Consumption (MMBtu/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Lights and App...	0.0
Photovoltaics	0.0
Total	0.0
Annual Energy Costs ($/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Lights and App...	0.0
Photovoltaics	0.0
Service Charge	0.0
Total	0.0

Energy
Area
Compliance

Undetermined | Denver, CO | 02/15/13

REM/Rate™
The Home Energy Rating Tool

NEW FEATURES – SAMPLE FILE GENERATOR

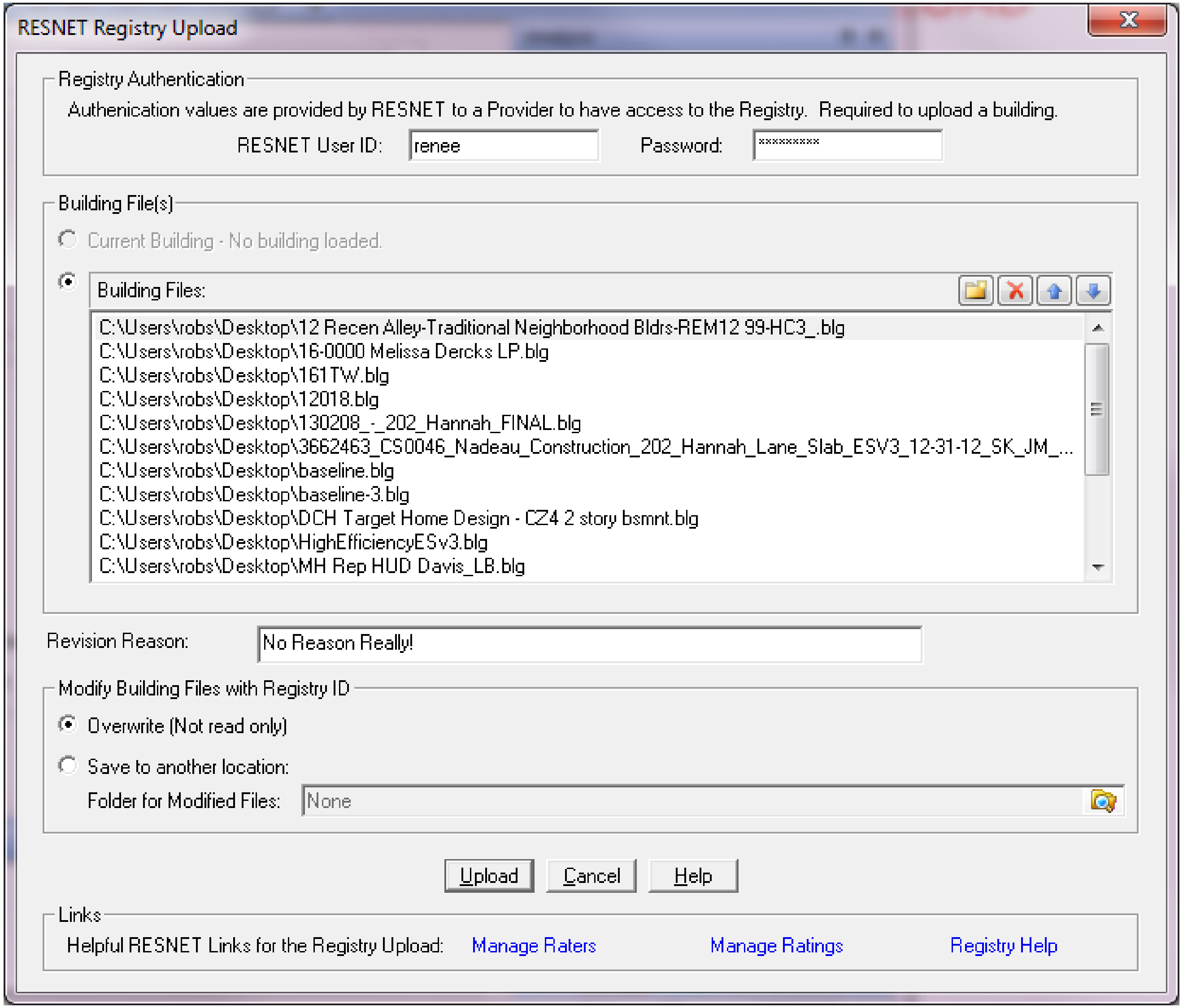

SampledAddresses.csv [Read-Only] - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Paste
Cut
Copy
Format Painter
Clipboard
Calibri
11
Font
Wrap Text
Merge & Center
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
AutoSum
Fill
Clear
Sort & Filter
Find & Select
Editing
E11
SampledAddresses
Ready
100%

bldgname	propowner	propstreet	propcity	propstate	propzip	propphone	samplesetid	inputfile	outputfile
house 1	Smith, Fred	2540 Frontier Ave	Boulder	CO	80301	(303) 777-9997	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency1.blg
house 2	owner2	2541 Frontier Ave	Boulder	CO	80301	(303) 777-9998	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency2.blg
house 3	Rob	2542 Frontier Ave	Boulder	CO	80301	(303) 777-9999	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency3.blg
house 4	Dave	2543 Frontier Ave	Boulder	CO	80301	(303) 777-1000	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency4.blg
house 5	Rick	2544 Frontier Ave	Boulder	CO	80301	(303) 777-1001	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency5.blg
house 6	Steve	2545 Frontier Ave	Boulder	CO	80301	(303) 777-1002	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency6.blg
house 7	Fred	2546 Frontier Ave	Boulder	CO	80301	(303) 777-1003	1001	C:\Users\robs\Desktop\demo_HighEfficiency.blg	C:\Users\robs\Desktop\Testing\demo_HighEfficiency7.blg

```
# these are comments
# which will be skipped
# by the parser
# blank lines will also be skipped
# bldgname - this is the name that will be placed in the Building Name field in the first input page of REM/Rate
# propowner - this field will populate the Property Owner's name in the Property Information
# propstreet - this field will populate the Property Address field in the Property Information
# propcity - this field will populate the Property City in the Property Information
# propzip - this field will populate the Property Zip Code in the Property Information
# propphone - this field will populate the Property Phone Number in the Property Information
# samplesetid - this field will populate the Sample Set ID in the RESNET Section for the specified building files
# inputfile - this shows the path and file name of the sampled building file which copies will be made
# outputfile - this is the path and filename of the copied sample building file

# A handy tip for users:
# to get the path of a file In Windows 7 Explorer, hold Shift key and right-click the file, select "Copy as Path".
```

NEW FEATURES – RESNET REGISTRY UPLOAD



RESNET Registry Upload

Registry Authentication

Authenication values are provided by RESNET to a Provider to have access to the Registry. Required to upload a building.

RESNET User ID: renee
Password: **********

Building File(s)

○ Current Building - No building loaded.

● Building Files:

C:\Users\robs\Desktop\12 Recen Alley-Traditional Neighborhood Bldrs-REM12 99-HC3_.blg
C:\Users\robs\Desktop\16-0000 Melissa Dercks LP.blg
C:\Users\robs\Desktop\161TW.blg
C:\Users\robs\Desktop\12018.blg
C:\Users\robs\Desktop\130208_-_202_Hannah_FINAL.blg
C:\Users\robs\Desktop\3662463_CS0046_Nadeau_Construction_202_Hannah_Lane_Slab_ESV3_12-31-12_SK_JM_...
C:\Users\robs\Desktop\baseline.blg
C:\Users\robs\Desktop\baseline-3.blg
C:\Users\robs\Desktop\DCH Target Home Design - CZ4 2 story bsmnt.blg
C:\Users\robs\Desktop\HighEfficiencyESv3.blg
C:\Users\robs\Desktop\MH Rep HUD Davis_LB.blg

Revision Reason: No Reason Really!

Modify Building Files with Registry ID

● Overwrite (Not read only)

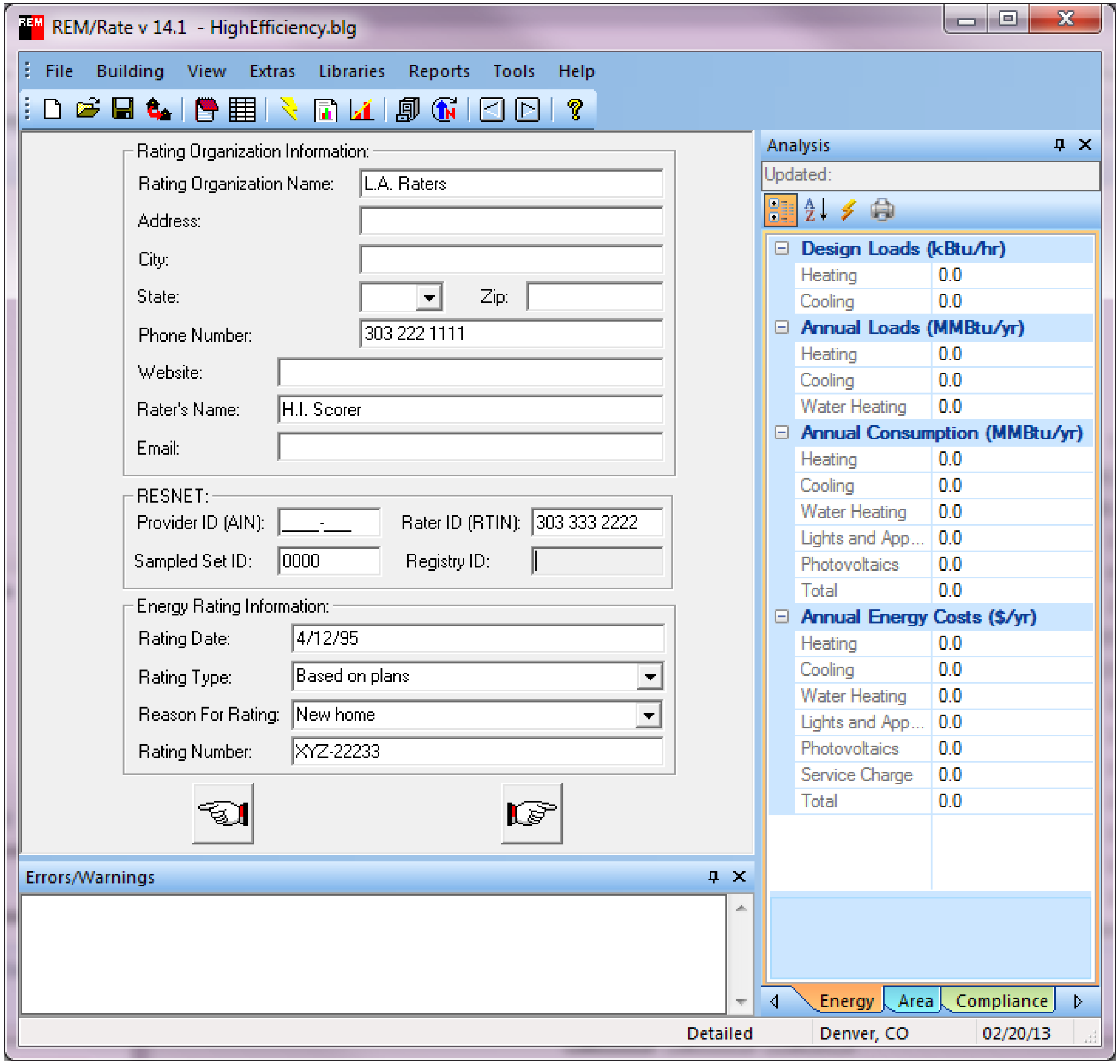
○ Save to another location:

Folder for Modified Files: None

Links

Helpful RESNET Links for the Registry Upload: Manage Raters Manage Ratings Registry Help

NEW FEATURES – RESNET REGISTRY UPLOAD



REM/Rate v 14.1 - HighEfficiency.blg

Rating Organization Information:

Rating Organization Name: L.A. Raters
Address:
City:
State: Zip:
Phone Number: 303 222 1111
Website:
Rater's Name: H.I. Scorer
Email:

RESNET:

Provider ID (AIN): ___-___ Rater ID (RTIN): 303 333 2222
Sampled Set ID: 0000 Registry ID:

Energy Rating Information:

Rating Date: 4/12/95
Rating Type: Based on plans
Reason For Rating: New home
Rating Number: XYZ-22233

Errors/Warnings

Analysis

Updated:

Design Loads (kBtu/hr)	
Heating	0.0
Cooling	0.0
Annual Loads (MMBtu/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Annual Consumption (MMBtu/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Lights and App...	0.0
Photovoltaics	0.0
Total	0.0
Annual Energy Costs ($/yr)	
Heating	0.0
Cooling	0.0
Water Heating	0.0
Lights and App...	0.0
Photovoltaics	0.0
Service Charge	0.0
Total	0.0

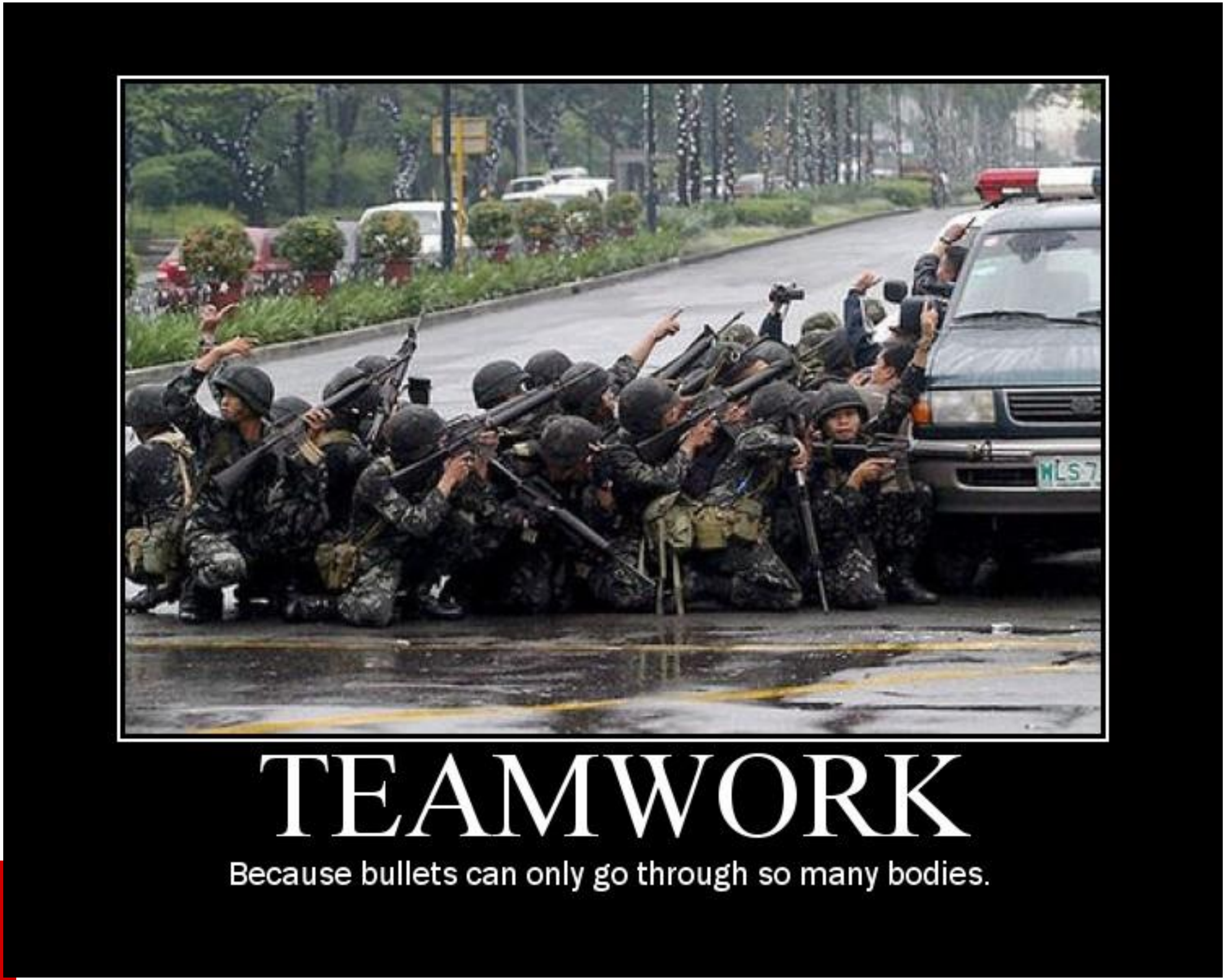
Detailed Denver, CO 02/20/13

REM/Rate™
The Home Energy Rating Tool

Problems Encountered

- XML Validation Error – this means there is a non-alphanumeric character in the name or in some entry field
- No Registry ID in the building file after upload
- Create a new building file and there is already a Registry ID number

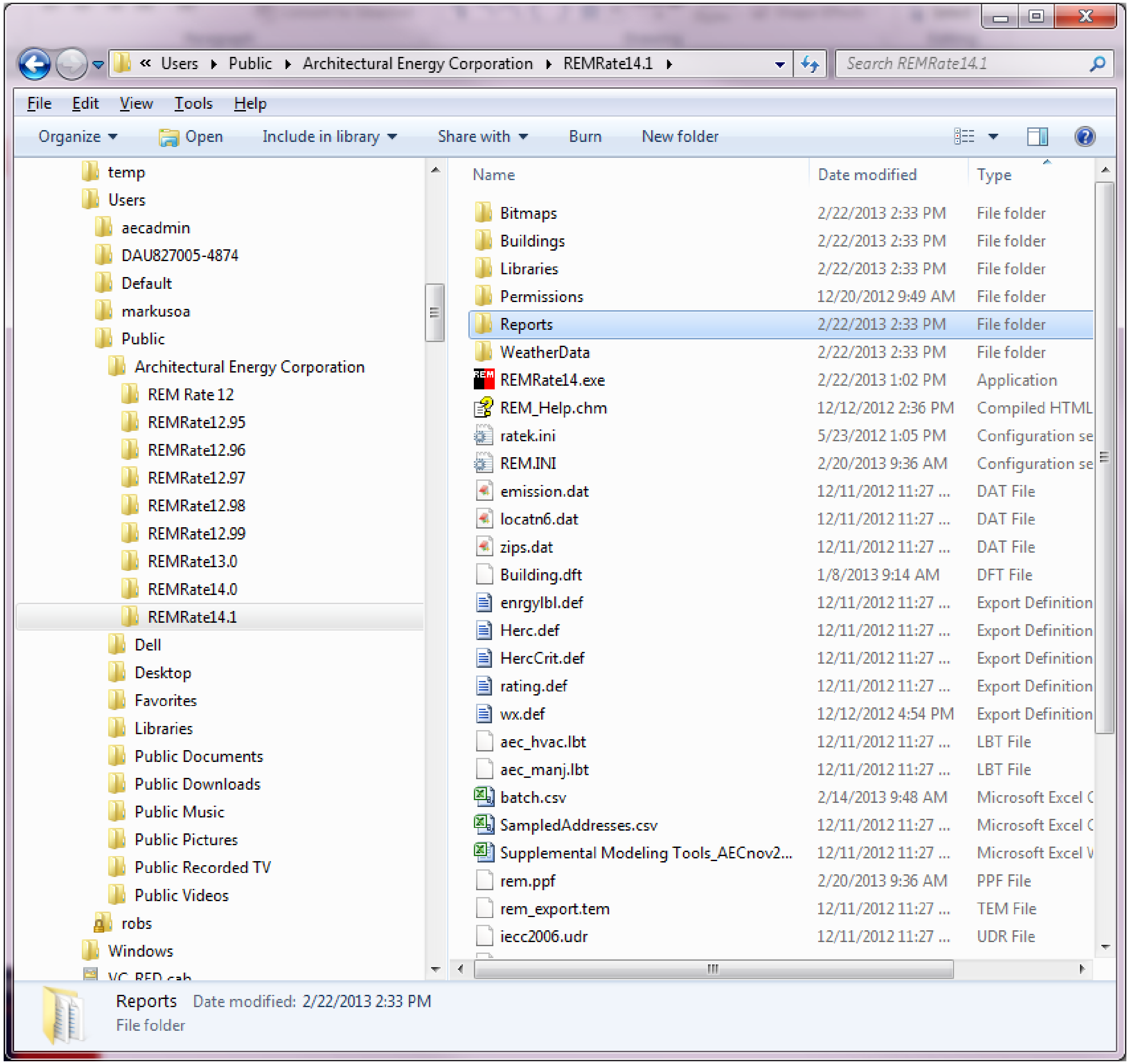
TEAMWORK


TEAMWORK
Because bullets can only go through so many bodies.

PRINTING/DATA OUTPUT

- New Printing Tool
- Quick Analysis
- Multi-Building Reporting
- Report Grouping
- Logos
- Graphs
- Print Permissions
- Data Export

PRINTING/DATA OUTPUT– NEW PRINTING TOOL


« Users ▸ Public ▸ Architectural Energy Corporation ▸ REMRate14.1 ▸
Search REMRate14.1
File Edit View Tools Help
Organize ▾ Open Include in library ▾ Share with ▾ Burn New folder

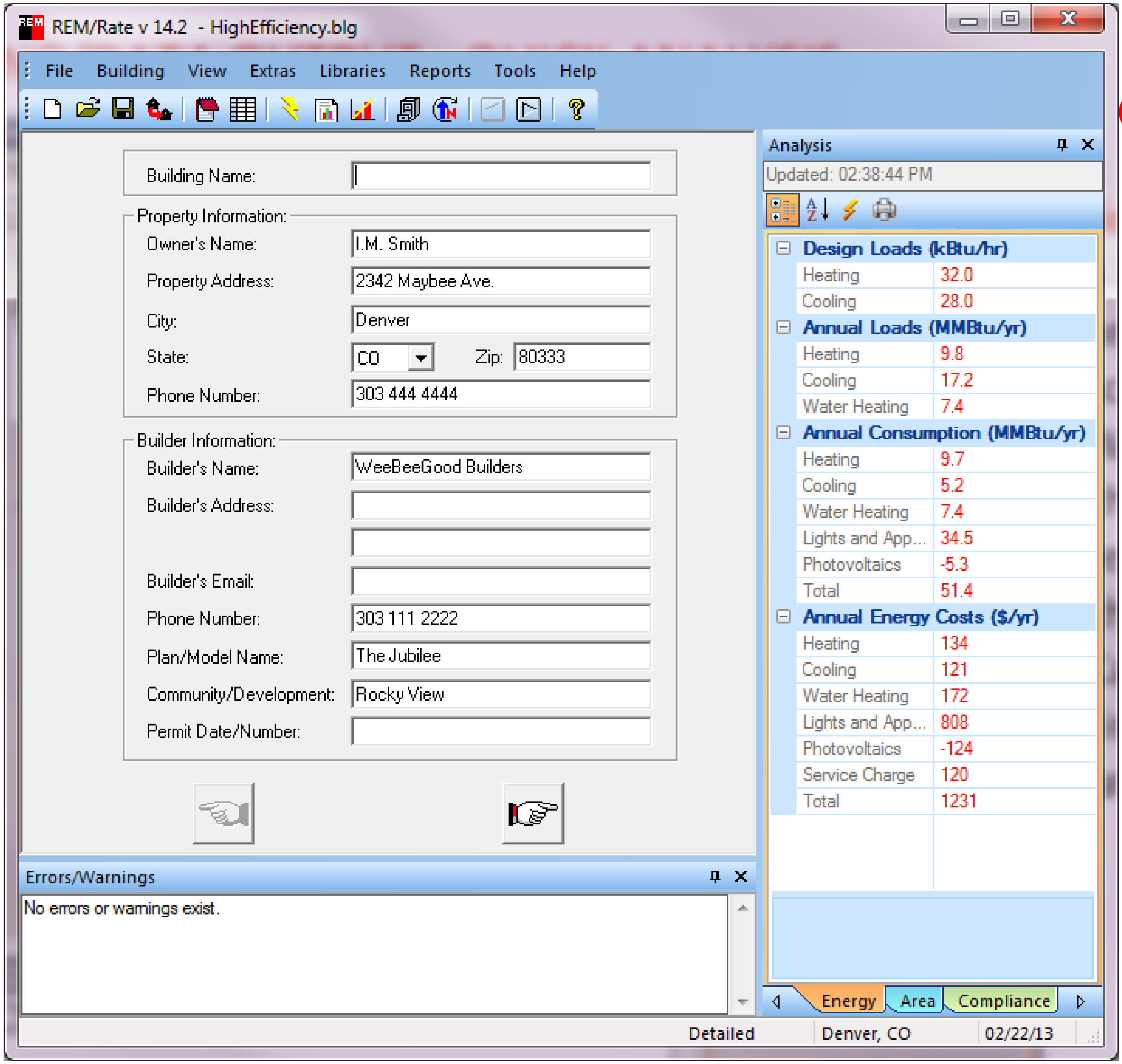
- temp
- Users
  - aecadmin
  - DAU827005-4874
  - Default
  - markusoa
  - Public
    - Architectural Energy Corporation
      - REM Rate 12
      - REMRate12.95
      - REMRate12.96
      - REMRate12.97
      - REMRate12.98
      - REMRate12.99
      - REMRate13.0
      - REMRate14.0
      - REMRate14.1
    - Dell
    - Desktop
    - Favorites
    - Libraries
    - Public Documents
    - Public Downloads
    - Public Music
    - Public Pictures
    - Public Recorded TV
    - Public Videos
  - robs
- Windows
- VC_RED.cab

Name	Date modified	Type
Bitmaps	2/22/2013 2:33 PM	File folder
Buildings	2/22/2013 2:33 PM	File folder
Libraries	2/22/2013 2:33 PM	File folder
Permissions	12/20/2012 9:49 AM	File folder
Reports	2/22/2013 2:33 PM	File folder
WeatherData	2/22/2013 2:33 PM	File folder
REMRate14.exe	2/22/2013 1:02 PM	Application
REM_Help.chm	12/12/2012 2:36 PM	Compiled HTML
ratek.ini	5/23/2012 1:05 PM	Configuration se
REM.INI	2/20/2013 9:36 AM	Configuration se
emission.dat	12/11/2012 11:27 ...	DAT File
locatn6.dat	12/11/2012 11:27 ...	DAT File
zips.dat	12/11/2012 11:27 ...	DAT File
Building.dft	1/8/2013 9:14 AM	DFT File
enrgylbl.def	12/11/2012 11:27 ...	Export Definition
Herc.def	12/11/2012 11:27 ...	Export Definition
HercCrit.def	12/11/2012 11:27 ...	Export Definition
rating.def	12/11/2012 11:27 ...	Export Definition
wx.def	12/12/2012 4:54 PM	Export Definition
aec_hvac.lbt	12/11/2012 11:27 ...	LBT File
aec_manj.lbt	12/11/2012 11:27 ...	LBT File
batch.csv	2/14/2013 9:48 AM	Microsoft Excel C
SampledAddresses.csv	12/11/2012 11:27 ...	Microsoft Excel C
Supplemental Modeling Tools_AECnov2...	12/11/2012 11:27 ...	Microsoft Excel V
rem.ppf	2/20/2013 9:36 AM	PPF File
rem_export.tem	12/11/2012 11:27 ...	TEM File
iecc2006.udr	12/11/2012 11:27 ...	UDR File

Reports Date modified: 2/22/2013 2:33 PM
File folder

REM/Rate™
The Home Energy Rating Tool

PRINTING/DATA OUTPUT– QUICK ANALYSIS


REM/Rate v 14.2 - HighEfficiency.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help
Analysis
Errors/Warnings
Energy
Area
Compliance
Detailed
Denver, CO
02/22/13

Building Name:

Property Information:

Owner's Name: I.M. Smith
Property Address: 2342 Maybee Ave.
City: Denver
State: CO Zip: 80333
Phone Number: 303 444 4444

Builder Information:

Builder's Name: WeeBeeGood Builders
Builder's Address:
Builder's Email:
Phone Number: 303 111 2222
Plan/Model Name: The Jubilee
Community/Development: Rocky View
Permit Date/Number:

Analysis

Updated: 02:38:44 PM

Design Loads (kBtu/hr)	
Heating	32.0
Cooling	28.0
Annual Loads (MMBtu/yr)	
Heating	9.8
Cooling	17.2
Water Heating	7.4
Annual Consumption (MMBtu/yr)	
Heating	9.7
Cooling	5.2
Water Heating	7.4
Lights and App...	34.5
Photovoltaics	-5.3
Total	51.4
Annual Energy Costs ($/yr)	
Heating	134
Cooling	121
Water Heating	172
Lights and App...	808
Photovoltaics	-124
Service Charge	120
Total	1231

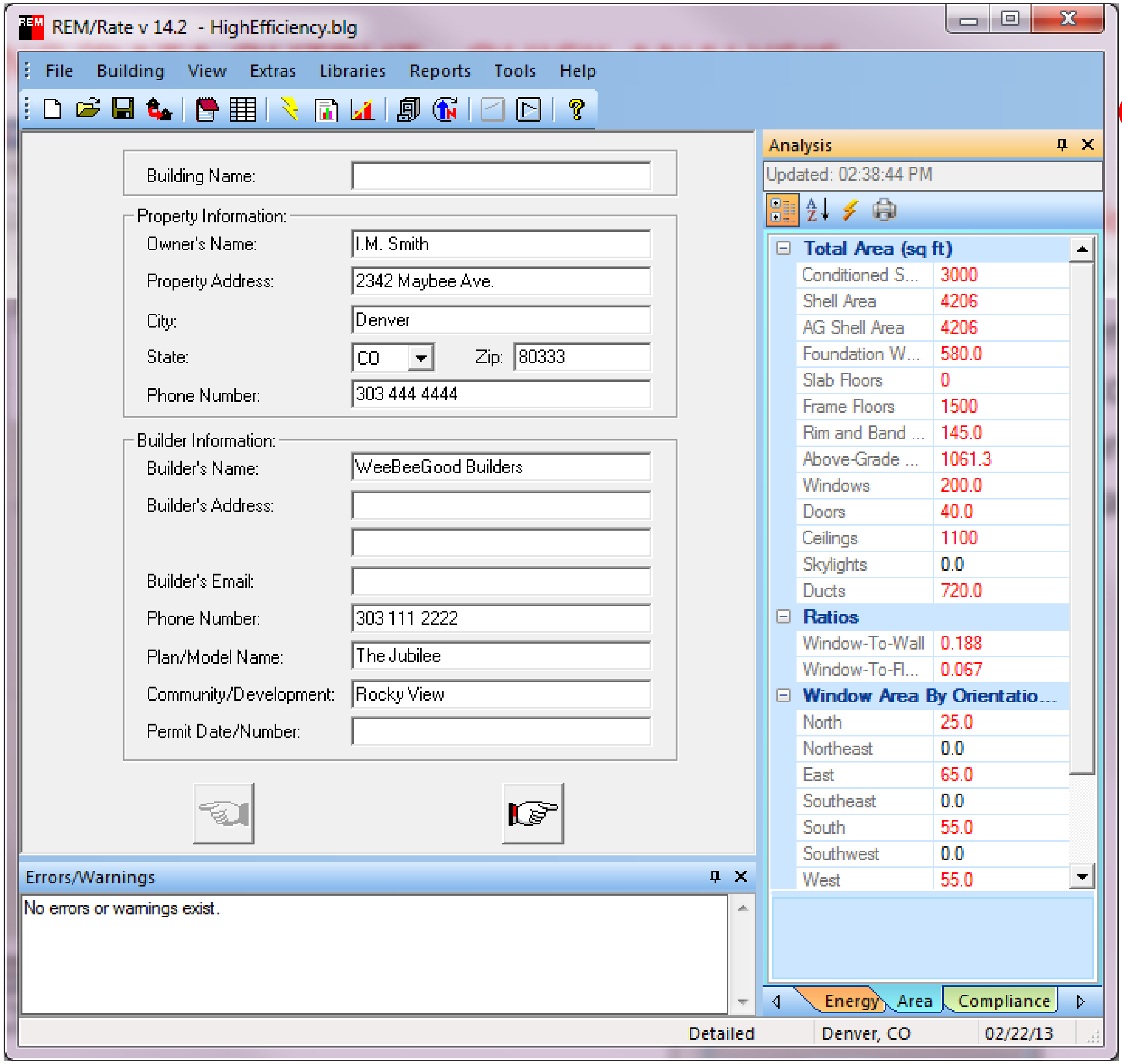
Errors/Warnings

No errors or warnings exist.

Quick Analysis

- Now docked on the REM screen
- Will show changes in results by changing color
- Can show the time stamp of latest results

PRINTING/DATA OUTPUT– QUICK ANALYSIS


REM/Rate v 14.2 - HighEfficiency.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help
Analysis
Errors/Warnings
Energy
Area
Compliance

Building Name:

Property Information:

Owner's Name: I.M. Smith

Property Address: 2342 Maybee Ave.

City: Denver

State: CO Zip: 80333

Phone Number: 303 444 4444

Builder Information:

Builder's Name: WeeBeeGood Builders

Builder's Address:

Builder's Email:

Phone Number: 303 111 2222

Plan/Model Name: The Jubilee

Community/Development: Rocky View

Permit Date/Number:

Updated: 02:38:44 PM

Total Area (sq ft)	
Conditioned S...	3000
Shell Area	4206
AG Shell Area	4206
Foundation W...	580.0
Slab Floors	0
Frame Floors	1500
Rim and Band ...	145.0
Above-Grade ...	1061.3
Windows	200.0
Doors	40.0
Ceilings	1100
Skylights	0.0
Ducts	720.0
Ratios	
Window-To-Wall	0.188
Window-To-Fl...	0.067
Window Area By Orientatio...	
North	25.0
Northeast	0.0
East	65.0
Southeast	0.0
South	55.0
Southwest	0.0
West	55.0

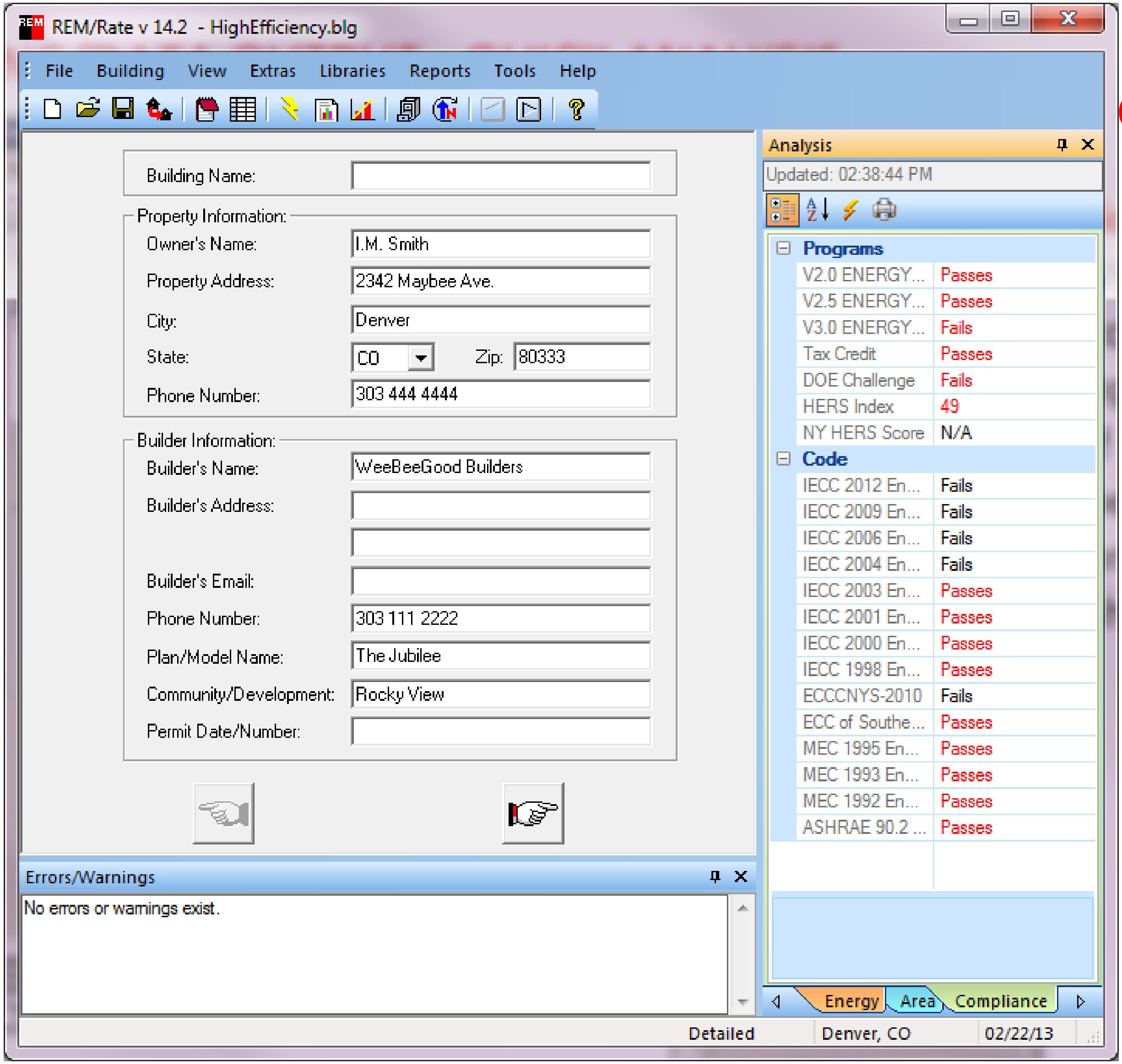
No errors or warnings exist.

Detailed Denver, CO 02/22/13

Quick Analysis

- Shows all envelope component areas and ratios

PRINTING/DATA OUTPUT– QUICK ANALYSIS


REM/Rate v 14.2 - HighEfficiency.blg
File
Building
View
Extras
Libraries
Reports
Tools
Help
Analysis
Energy
Area
Compliance
Errors/Warnings

Building Name:

Property Information:

Owner's Name: I.M. Smith

Property Address: 2342 Maybee Ave.

City: Denver

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Phone Number: 303 444 4444

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Builder's Name: WeeBeeGood Builders

Builder's Address:

Builder's Email:

Phone Number: 303 111 2222

Plan/Model Name: The Jubilee

Community/Development: Rocky View

Permit Date/Number:

Updated: 02:38:44 PM

Programs	
V2.0 ENERGY...	Passes
V2.5 ENERGY...	Passes
V3.0 ENERGY...	Fails
Tax Credit	Passes
DOE Challenge	Fails
HERS Index	49
NY HERS Score	N/A
Code	
IECC 2012 En...	Fails
IECC 2009 En...	Fails
IECC 2006 En...	Fails
IECC 2004 En...	Fails
IECC 2003 En...	Passes
IECC 2001 En...	Passes
IECC 2000 En...	Passes
IECC 1998 En...	Passes
ECCCNYS-2010	Fails
ECC of Southe...	Passes
MEC 1995 En...	Passes
MEC 1993 En...	Passes
MEC 1992 En...	Passes
ASHRAE 90.2 ...	Passes

No errors or warnings exist.

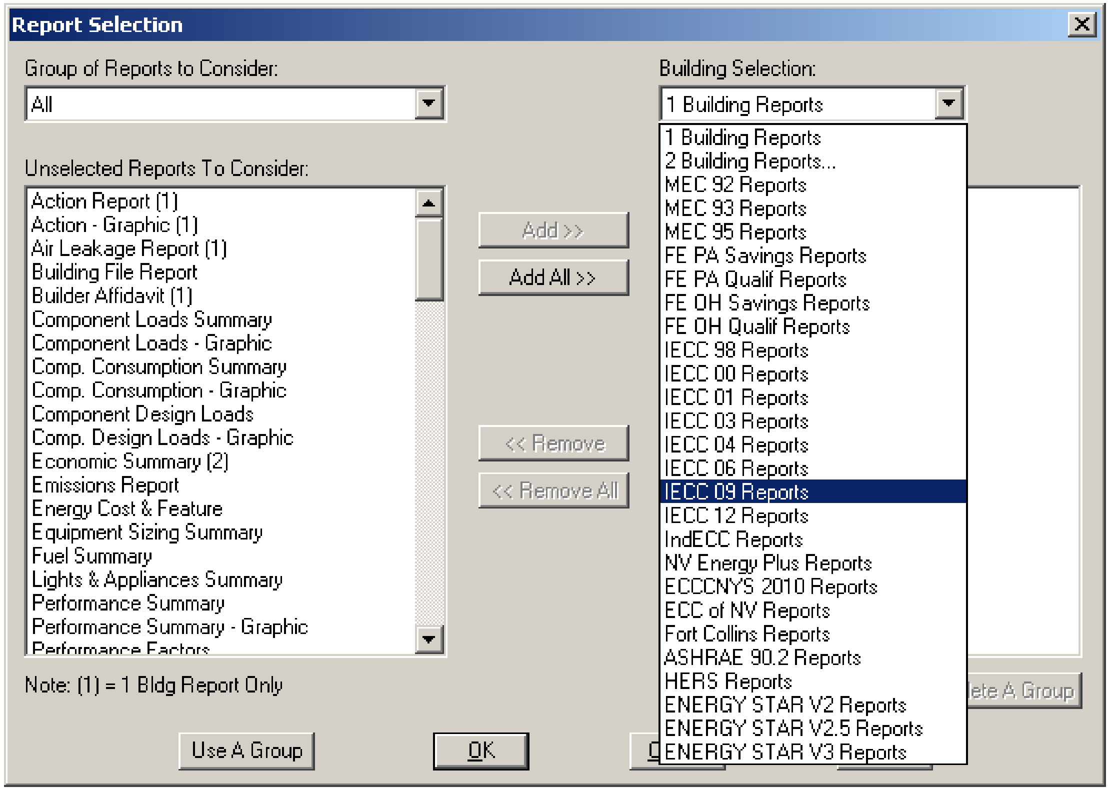
Detailed | Denver, CO | 02/22/13

Quick Analysis

- Shows all code compliance options
- If codes pass performance or UA, it will show Pa

PRINTING/DATA OUTPUT– MULTIPLE BUILDING REPORTS

- Have you ever wished you could compare 2 buildings on one report?



Report Selection

Group of Reports to Consider: All

Building Selection: 1 Building Reports

Unselected Reports To Consider:

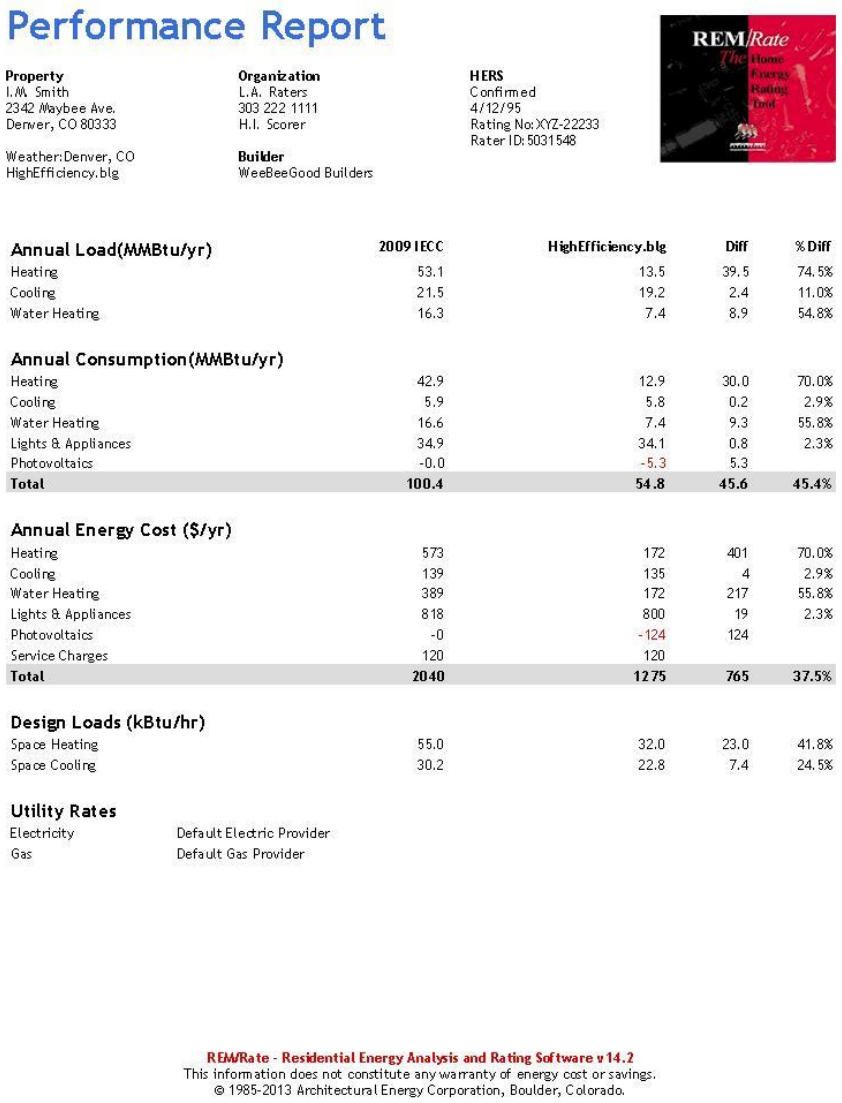
- Action Report (1)
- Action - Graphic (1)
- Air Leakage Report (1)
- Building File Report
- Builder Affidavit (1)
- Component Loads Summary
- Component Loads - Graphic
- Comp. Consumption Summary
- Comp. Consumption - Graphic
- Component Design Loads
- Comp. Design Loads - Graphic
- Economic Summary (2)
- Emissions Report
- Energy Cost & Feature
- Equipment Sizing Summary
- Fuel Summary
- Lights & Appliances Summary
- Performance Summary
- Performance Summary - Graphic
- Performance Factors

Note: (1) = 1 Bldg Report Only

- 1 Building Reports
- 2 Building Reports...
- MEC 92 Reports
- MEC 93 Reports
- MEC 95 Reports
- FE PA Savings Reports
- FE PA Qualif Reports
- FE OH Savings Reports
- FE OH Qualif Reports
- IECC 98 Reports
- IECC 00 Reports
- IECC 01 Reports
- IECC 03 Reports
- IECC 04 Reports
- IECC 06 Reports
- IECC 09 Reports
- IECC 12 Reports
- IndECC Reports
- NV Energy Plus Reports
- ECCCNYS 2010 Reports
- ECC of NV Reports
- Fort Collins Reports
- ASHRAE 90.2 Reports
- HERS Reports
- ENERGY STAR V2 Reports
- ENERGY STAR V2.5 Reports
- ENERGY STAR V3 Reports

PRINTING/DATA OUTPUT– MULTIPLE BUILDING REPORTS

- On one report, a the design building and reference home is viewed?
- Or two building files together



Performance Report

Property
I.M. Smith
2342 Maybee Ave.
Denver, CO 80333

Weather: Denver, CO
HighEfficiency.blg

Organization
L.A. Raters
303 222 1111
H.I. Scorer

Builder
WeeBeeGood Builders

HERS
Confirmed
4/12/95
Rating No: XYZ-22233
Rater ID: 5031548

Annual Load(MMBtu/yr)	**2009 IECC**	**HighEfficiency.blg**	**Diff**	**% Diff**
Heating	53.1	13.5	39.5	74.5%
Cooling	21.5	19.2	2.4	11.0%
Water Heating	16.3	7.4	8.9	54.8%

Annual Consumption(MMBtu/yr)				
Heating	42.9	12.9	30.0	70.0%
Cooling	5.9	5.8	0.2	2.9%
Water Heating	16.6	7.4	9.3	55.8%
Lights & Appliances	34.9	34.1	0.8	2.3%
Photovoltaics	-0.0	-5.3	5.3	
Total	**100.4**	**54.8**	**45.6**	**45.4%**

Annual Energy Cost ($/yr)				
Heating	573	172	401	70.0%
Cooling	139	135	4	2.9%
Water Heating	389	172	217	55.8%
Lights & Appliances	818	800	19	2.3%
Photovoltaics	-0	-124	124	
Service Charges	120	120		
Total	**2040**	**1275**	**765**	**37.5%**

Design Loads (kBtu/hr)				
Space Heating	55.0	32.0	23.0	41.8%
Space Cooling	30.2	22.8	7.4	24.5%

Utility Rates	
Electricity	Default Electric Provider
Gas	Default Gas Provider

REM/Rate - Residential Energy Analysis and Rating Software v 14.2
This information does not constitute any warranty of energy cost or savings.
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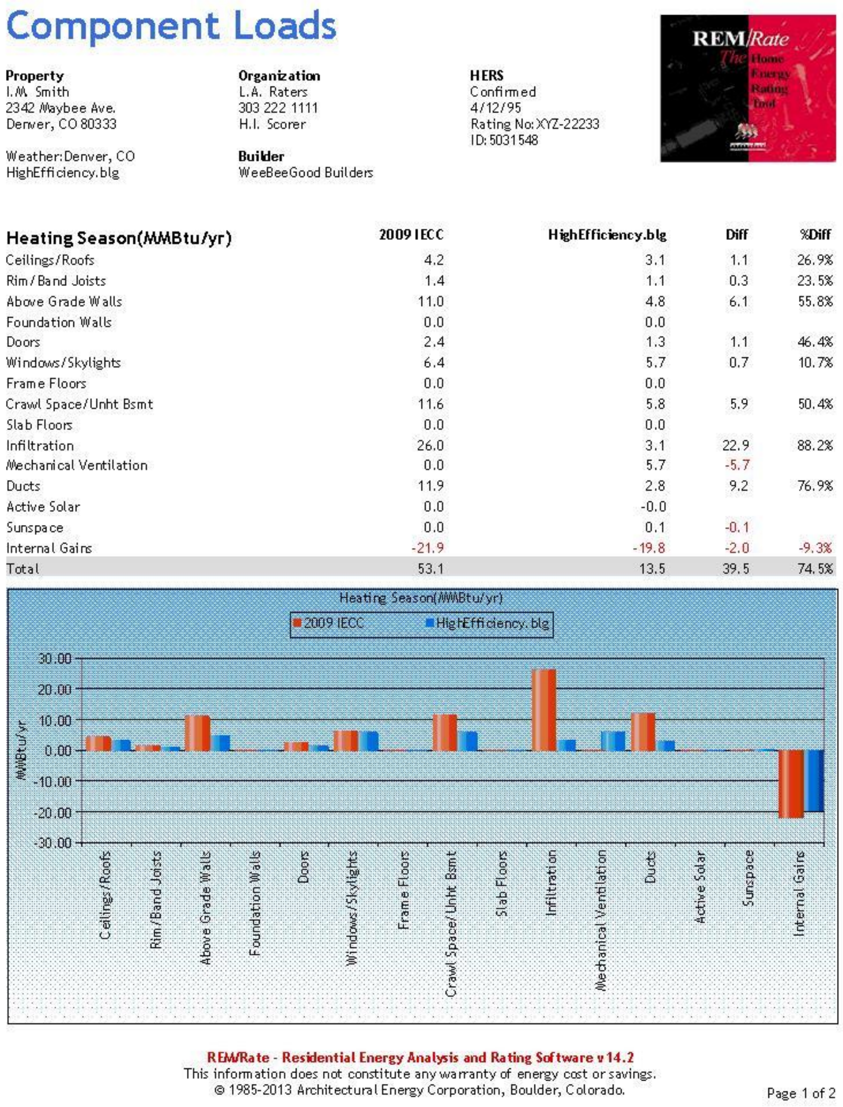
PRINTING/DATA OUTPUT– MULTIPLE BUILDING REPORTS

- Have you ever wished you could graphically compare two buildings?



Component Loads

Property
I.M. Smith
2342 Maybee Ave.
Denver, CO 80333

Weather: Denver, CO
HighEfficiency.blg

Organization
L.A. Raters
303 222 1111
H.I. Scorer

Builder
WeeBeeGood Builders

HERS
Confirmed
4/12/95
Rating No: XYZ-22233
ID: 5031548

Heating Season(MMBtu/yr)	**2009 IECC**	**HighEfficiency.blg**	**Diff**	**%Diff**
Ceilings/Roofs	4.2	3.1	1.1	26.9%
Rim/Band Joists	1.4	1.1	0.3	23.5%
Above Grade Walls	11.0	4.8	6.1	55.8%
Foundation Walls	0.0	0.0		
Doors	2.4	1.3	1.1	46.4%
Windows/Skylights	6.4	5.7	0.7	10.7%
Frame Floors	0.0	0.0		
Crawl Space/Unht Bsmt	11.6	5.8	5.9	50.4%
Slab Floors	0.0	0.0		
Infiltration	26.0	3.1	22.9	88.2%
Mechanical Ventilation	0.0	5.7	-5.7	
Ducts	11.9	2.8	9.2	76.9%
Active Solar	0.0	-0.0		
Sunspace	0.0	0.1	-0.1	
Internal Gains	-21.9	-19.8	-2.0	-9.3%
Total	53.1	13.5	39.5	74.5%

Heating Season(MMBtu/yr)
2009 IECC
HighEfficiency.blg
MMBtu/yr
30.00
20.00
10.00
0.00
-10.00
-20.00
-30.00
Ceilings/Roofs
Rim/Band Joists
Above Grade Walls
Foundation Walls
Doors
Windows/Skylights
Frame Floors
Crawl Space/Unht Bsmt
Slab Floors
Infiltration
Mechanical Ventilation
Ducts
Active Solar
Sunspace
Internal Gains

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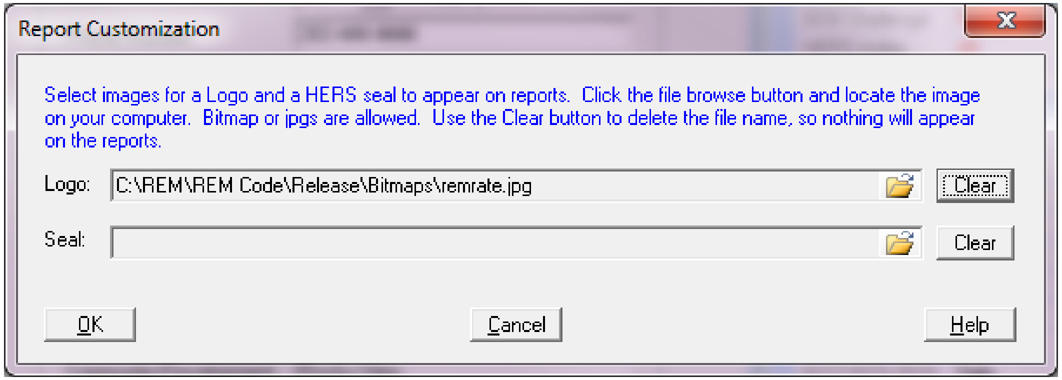
Page 1 of 2

PRINTING/DATA OUTPUT– LOGOS ON REPORTS

New Logos →



Report Customization

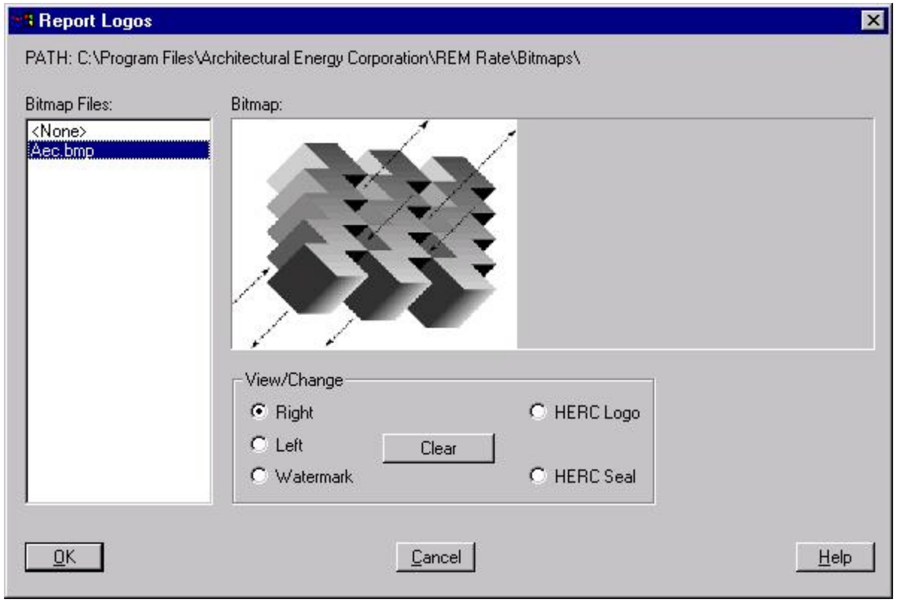
Select images for a Logo and a HERS seal to appear on reports. Click the file browse button and locate the image on your computer. Bitmap or jpgs are allowed. Use the Clear button to delete the file name, so nothing will appear on the reports.

Logo: C:\REM\REM Code\Release\Bitmaps\remrate.jpg

Seal:

Old Logos

- Reports->Old Logos…
  - Select the radio button representing the position you want to add a logo.
  - If there is already a logo selected for that position, its filename will be highlighted and the image will be visible.
  - Logo bitmaps must be placed in the path shown at top.



Report Logos

PATH: C:\Program Files\Architectural Energy Corporation\REM Rate\Bitmaps\

Bitmap Files:
<None>
Aec.bmp

View/Change: ● Right ○ Left ○ Watermark ○ HERC Logo ○ HERC Seal

PRINTING/DATA OUTPUT– REPORT GROUPING

- **Report grouping**
  - Select multiple reports quickly
  - Can be defined by user

PRINTING/DATA OUTPUT– PRINT PERMISSIONS

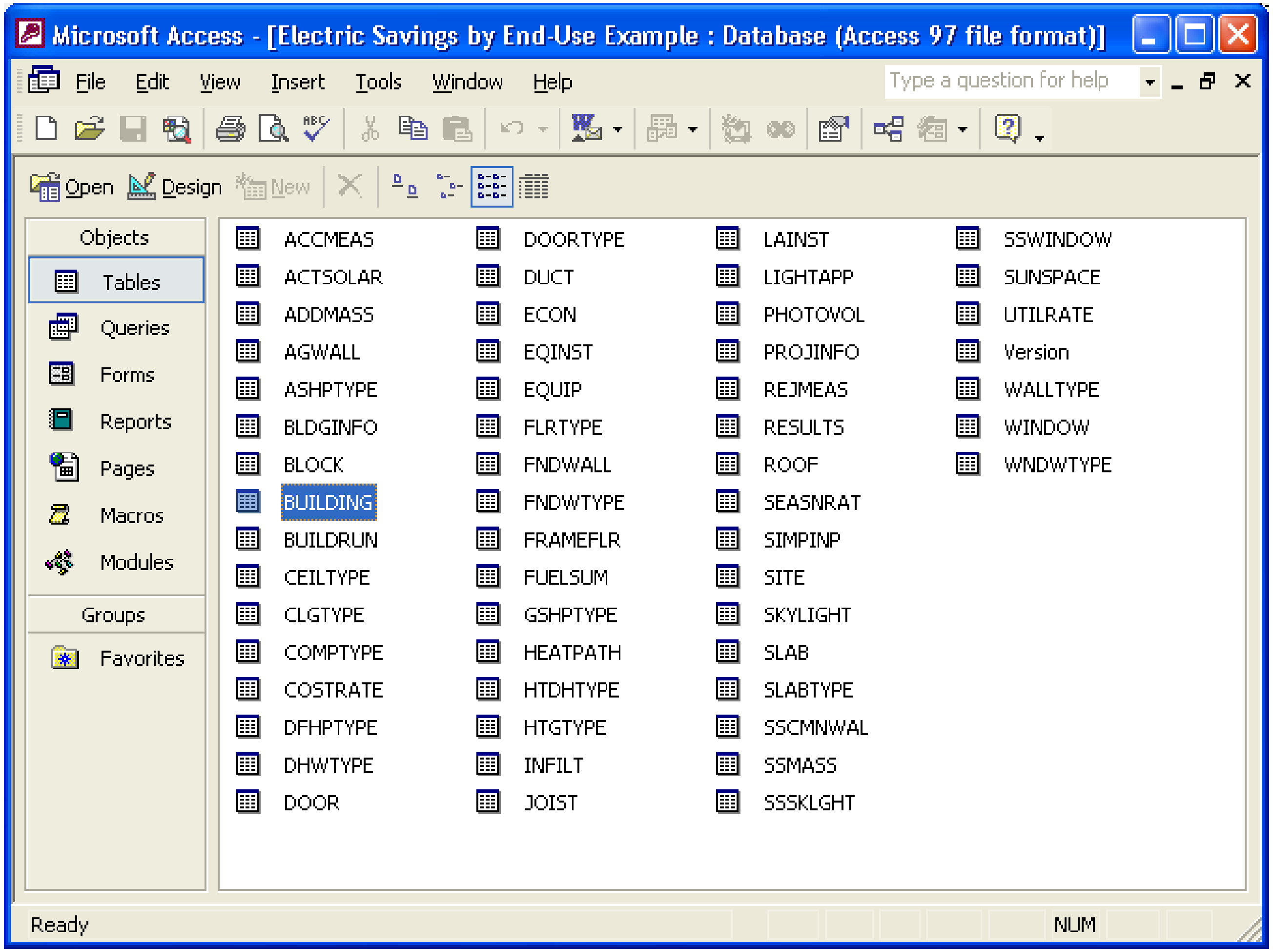
- **Print Permissions**

PRINTING/DATA OUTPUT – DATA EXPORTING

Export Database

- Access or SQL relational database
- All input, nearly all output
- Use for archiving, data mining (w/ queries)
- Reference homes can be exported
- Extensive documentation on Help menu

PRINTING/DATA OUTPUT – DATA EXPORTING


Microsoft Access - [Electric Savings by End-Use Example : Database (Access 97 file format)]
File
Edit
View
Insert
Tools
Window
Help
Type a question for help
Open
Design
New
Objects
Tables
Queries
Forms
Reports
Pages
Macros
Modules
Groups
Favorites
ACCMEAS
ACTSOLAR
ADDMASS
AGWALL
ASHPTYPE
BLDGINFO
BLOCK
BUILDING
BUILDRUN
CEILTYPE
CLGTYPE
COMPTYPE
COSTRATE
DFHPTYPE
DHWTYPE
DOOR
DOORTYPE
DUCT
ECON
EQINST
EQUIP
FLRTYPE
FNDWALL
FNDWTYPE
FRAMEFLR
FUELSUM
GSHPTYPE
HEATPATH
HTDHTYPE
HTGTYPE
INFILT
JOIST
LAINST
LIGHTAPP
PHOTOVOL
PROJINFO
REJMEAS
RESULTS
ROOF
SEASNRAT
SIMPINP
SITE
SKYLIGHT
SLAB
SLABTYPE
SSCMNWAL
SSMASS
SSSKLGHT
SSWINDOW
SUNSPACE
UTILRATE
Version
WALLTYPE
WINDOW
WNDWTYPE
Ready
NUM

PRINTING/DATA OUTPUT – DATA EXPORTING

Window-to-Wall Area Ratio

<= 0.12	> 0.12 and <= 0.15	> 0.15 and <= 0.18	> 0.18 and <= 0.20	> 0.20
67.16	23.88	5.97	1.49	1.49

Ceiling R-Value

< R19	= R19	> R19 and < R30	= R30	> R30 and < R38	= R38	> R38
0.00	0.00	0.00	24.00	0.00	66.67	9.33

Cooling SEER

<= 10	> 10 and < 12	= 12	> 12
50.00	25.76	9.09	15.15

HERS Rating

< 70	>= 70 and < 80	>= 80 and < 83	>= 83 and < 86	>= 86 and < 88	>= 88 and < 90	> 90
0.00	1.49	11.94	52.24	28.36	5.97	0.00

PRINTING/DATA OUTPUT – DATA EXPORTING

SBURATENO	Therms - Heating	kWh - Heating	kWh - Cooling	Therms - Water	kWh - Water	Cooling Peak Btuh	SEER	EER
003-00543		6162	1586		5691	37344	14	

Building Name	Electric Savings (kWh)	Gas Savings (Therms)	Oil Savings (Therms)	LP Savings (Therms)	Reference Pk Clg (kBtuh)	Qualifying Pk Clg (kBtuh)	Reference Pk Htg (kBtuh)	Qualifying Pk Htg (kBtuh)	HERS Score
052401-090-04-dowdell.blg	4195	765			51.70	37.92	83.69	65.95	88.20

PRINTING/DATA OUTPUT – DATA EXPORTING

CSV

- Comma separated variable
- Imports into Microsoft Excel
- Single building results
    - Same file name as building file, *.csv extension
    - Toggle on/off in Options menu
- Batch
    - Named Batch.csv
    - Always generated

TEAMWORK

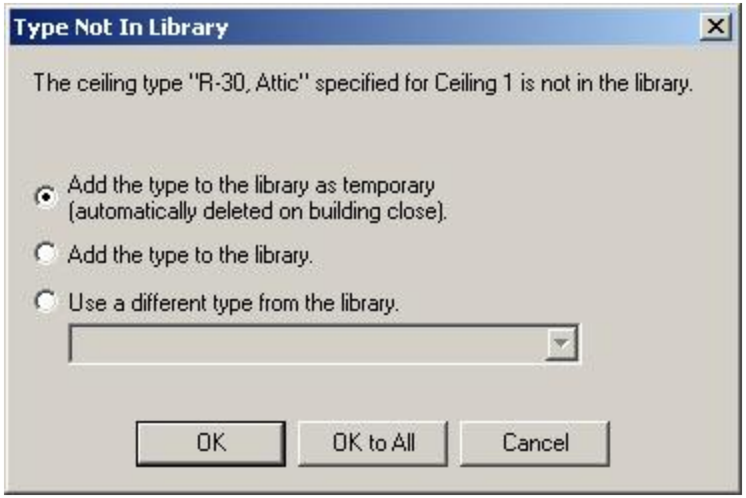
funXite.com
Logistics manager
Marketing manager
HR manager
Safety manager
Security manager
Communications manager
Project manager
QA/QC manager
Public Relations
Product development manager
me

LIBRARIES

- File Opening
- Temporary Libraries
- Library Sets and Transfer
- Sorting

LIBRARIES – FILE OPENING

- Messages when opening building files
  - **Temporary** library entries
    - ☐ Appends an * to name
    - ☐ Avoids changing building file and voiding print permissions
  - **Adding** to the library
  - **Updating** a building from the library
    - ☐ Using a manually selected entry
    - ☐ Or, the library version of a modified entry



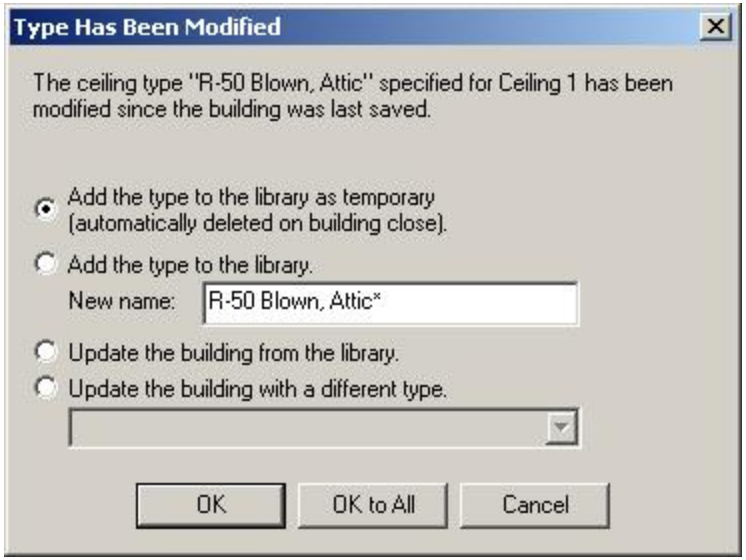
Type Not In Library

The ceiling type "R-30, Attic" specified for Ceiling 1 is not in the library.

● Add the type to the library as temporary (automatically deleted on building close).

○ Add the type to the library.

○ Use a different type from the library.



Type Has Been Modified

The ceiling type "R-50 Blown, Attic" specified for Ceiling 1 has been modified since the building was last saved.

● Add the type to the library as temporary (automatically deleted on building close).

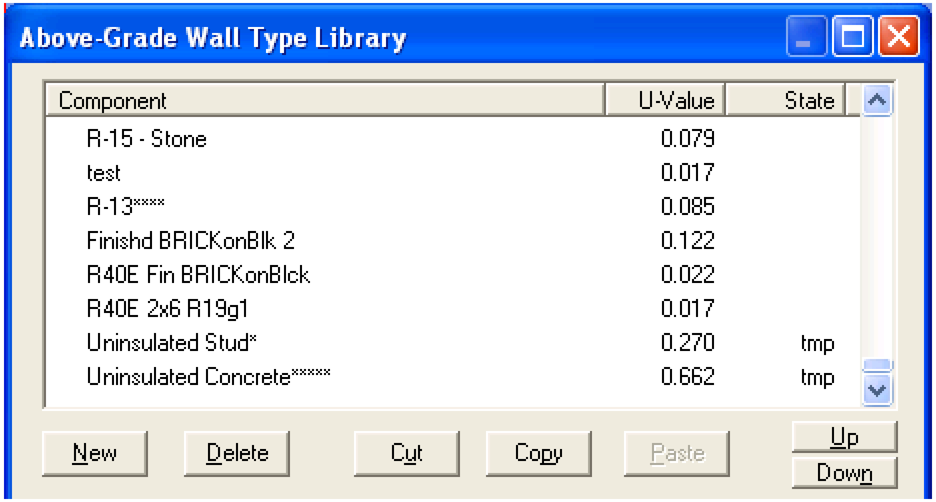
○ Add the type to the library.

New name: R-50 Blown, Attic*

○ Update the building from the library.

○ Update the building with a different type.

LIBRARIES – FILE OPENING


Above-Grade Wall Type Library

Component	U-Value	State
R-15 - Stone	0.079	
test	0.017	
R-13****	0.085	
Finishd BRICKonBlk 2	0.122	
R40E Fin BRICKonBlck	0.022	
R40E 2x6 R19g1	0.017	
Uninsulated Stud*	0.270	tmp
Uninsulated Concrete*****	0.662	tmp

New
Delete
Cut
Copy
Paste
Up
Down

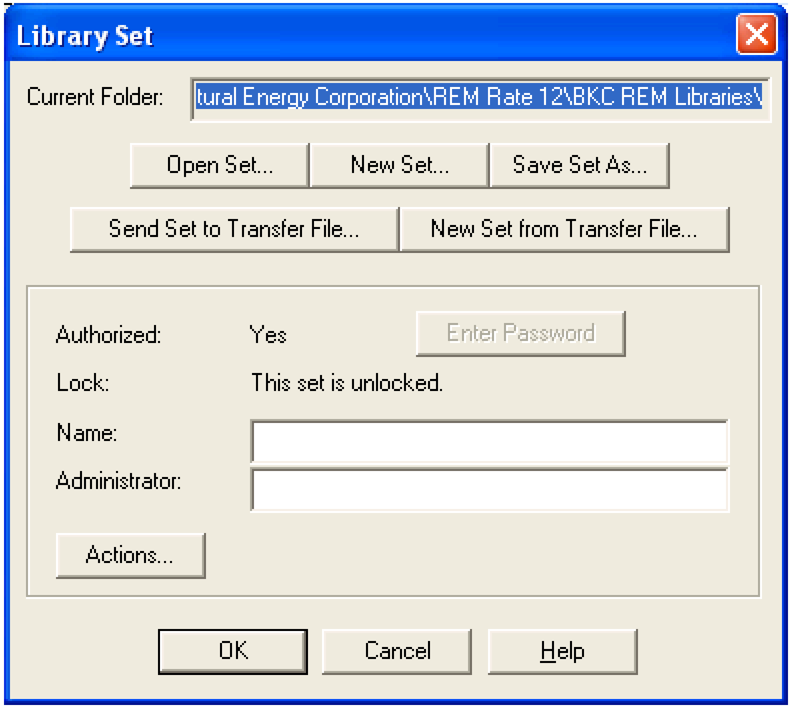
- Use of Temporary Library entries makes life easier (denoted with an “*” and “tmp”)
- Temp. library feature provides a way to spot new entries that need review
- Try not to save buildings with temporary libraries as this will save the asterisk and continue to add them

LIBRARIES – TRANSFERING

- Copying libraries, or Backing up
  - Full Library Sets
    - Easiest way: copy the entire folder containing the Library Set.
      - Default name & location: **C:\...\REM Rate 14\Libraries**
    - If doing backup, archive it in a safe place
  - Library Subsets
    - Use Transfer Files (Libraries Menu)
      - Select which entries to transfer/share

LIBRARIES – LIBRARY SETS

- Library Set (Libraries Menu)
  - You can have specialized library sets, such as
    - ☐ Libraries required by a weatherization program
    - ☐ New construction libraries
  - Change sets when needed


Library Set

Current Folder: tural Energy Corporation\REM Rate 12\BKC REM Libraries\

Authorized: Yes

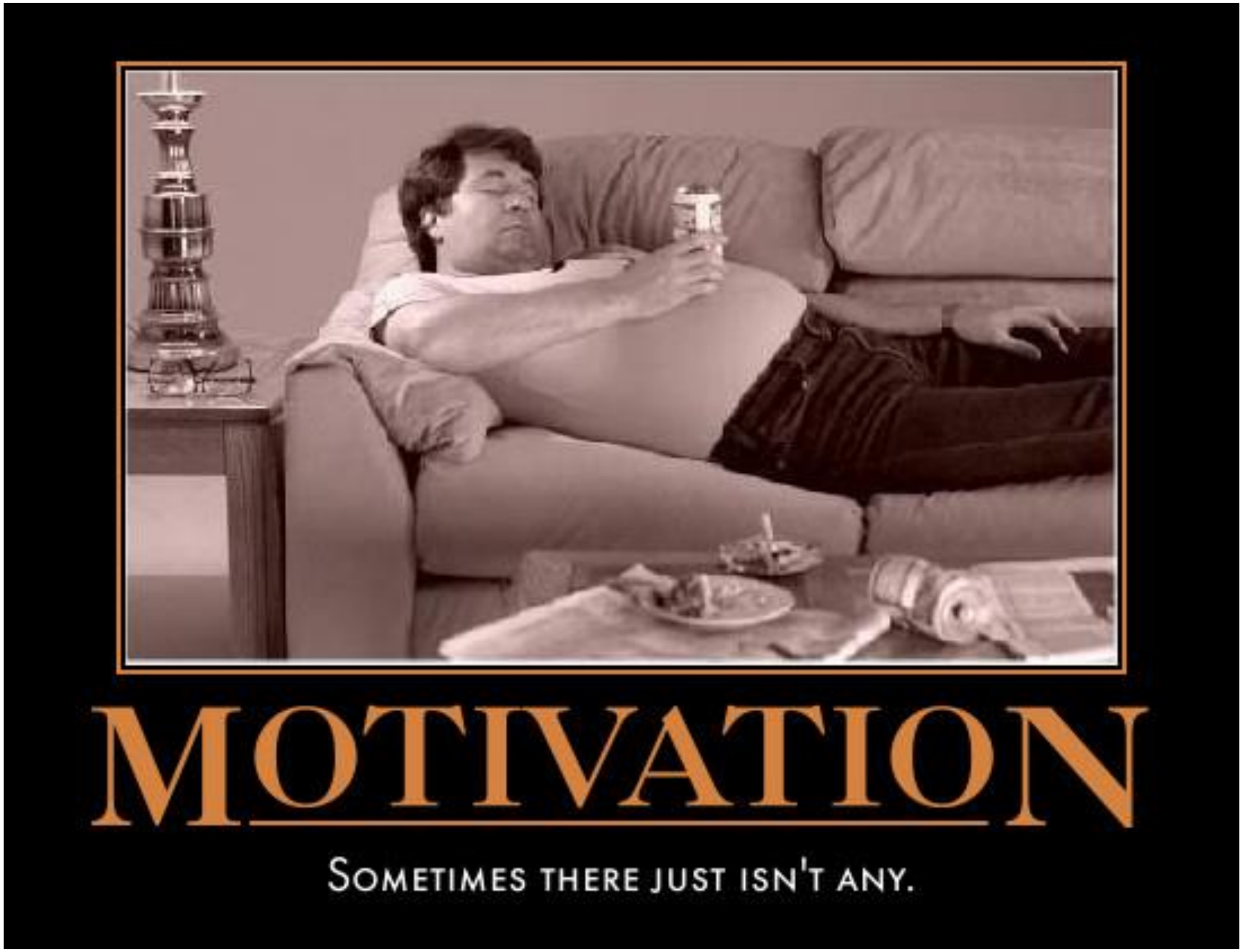
Lock: This set is unlocked.

Name:

Administrator:

Open Set...
New Set...
Save Set As...
Send Set to Transfer File...
New Set from Transfer File...
Enter Password
Actions...
OK
Cancel
Help

MOTIVATION


MOTIVATION
Sometimes there just isn't any.

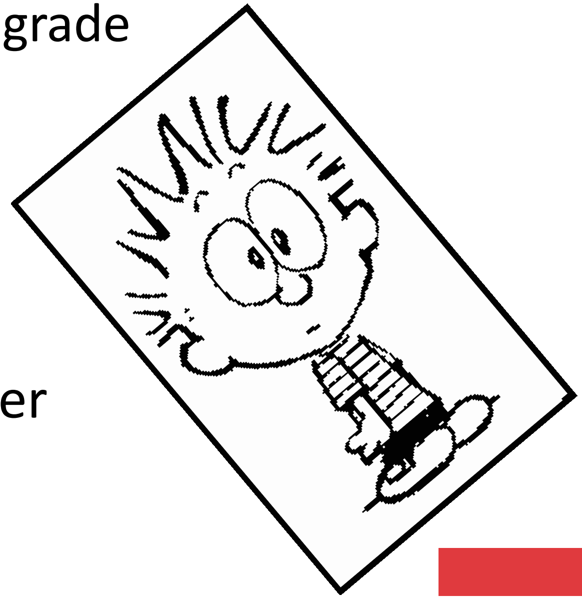
REM/Rate™
The Home Energy Rating Tool

ANALYSIS

- Existing Home Toolset
  - Utility Bill Disaggregation
  - Improvement Analysis
- User Defined Reference Home
- Batching

ANALYSIS – EXISTING HOMES

- Existing Home Toolset Demonstration
  - Utility Bill Analysis
    - Including efforts to calibrate model of my own home
  - Component Consumption Graphic
    - To see what parts of house most need upgrade
  - Improvement Analysis
    - Economic optimization of improvements
  - Multi-building comparisons of before & after



ANALYSIS – USER DEFINED REFERENCE HOME

- **User-Defined Reference Home**
  - Create custom reference homes
  - Local codes, utility program baseline
  - Uses text file w/ scripting language
  - Example provided w/ software: m92bstn.udr
  - Start w/ copy of example, retain *.udr extension
  - Extensive documentation in help system

ANALYSIS – USER DEFINED REFERENCE HOME

- **Batching**
  - Building file modifications (File menu)
  - Results (Reports menu)
  - Batch report, includes ENERGY STAR, tax credit status
  - Can generate UDRH and other reports
  - Export database
  - ENERGY STAR labels, mailing labels

TECHNICAL

- Conditioned vs Unconditioned Foundations
- Sealed Attics
- Thermal Boundaries
- Utility Rates
- Integrated Systems
- Ground Source Heat Pumps

TECHNICAL – COND VS UNCOND FOUNDATIONS

- Conditioned vs. Unconditioned Basements
  - Conditioned - setpoint is maintained
  - Unconditioned - temperature calculated based on connections to conditioned/ambient, gain from ducts, equipment; generally floats 5 - 10 degrees lower than setpoint.
- Conditioned Crawls

TECHNICAL – SEALED ATTICS

- Sealed Attics –changes!
  - DON’T model as Vaulted Ceiling or include the volume in Conditioned Space.
  - DO use the new Ceiling Type (Sealed Attic) in the Ceiling Input screen.
  - DO pay attention to the total exposure area of the attic, not just the roof area. (Attic Exterior input)

TECHNICAL – THERMAL BOUNDARY

- Thermal Boundary
  - For unconditioned basements and crawlspaces, REM will use insulation levels to determine where the thermal boundary is – frame floor or the foundation wall.
  - REM now can allow the user to choose the thermal boundary location

TECHNICAL – UTILITY RATES

- Utility rates
  - Seasonal
  - Block rates

TECHNICAL – INTEGRATED SYSTEMS

- Integrated space/water heating systems
  - Boiler w/ side arm tank
    - Two systems: space heating, water heating
    - Use boiler AFUE for tank recovery efficiency
    - Set tank EF = 0.75 * AFUE
  - DHW tank serving space heating coils
    - Two systems: space heating, water heating
    - Use tank recovery efficiency for space AFUE

TECHNICAL – GROUND SOURCE HEAT PUMPS

- GSHPs – REM model vs vendor values
  - To use REM model, use single entry from GSHP library
  - To use vendor-calculated seasonal efficiencies, use entries from heating-only & cooling-only libraries
    - ☐ Review Help for libraries containing GSHP's!
  - REM model has fixed assumptions regarding soil characteristics

TRICKS

- Equation Solver
- Tabs
- Docking Panes
- Reset Window Layout
- Default Building
- Window Rotation
- Registration

TRICKS

- **Keyboard shortcuts**
  - Equation solver in fields
    - All numeric inputs
  - Using Tab key to speed entry
  - Using <alt> key to access menus

TRICKS

- **Docking Panes**
  - REM now docks windows for Quick Analysis and Errors/Warnings
- **Reset Window Layout**
  - If Notes or Spreadsheet is moved off the screen, or can't find Errors/Warnings or Analysis panes
  - Brings back the default layout of REM/Rate
  - Under the Tools Menu

TRICKS

- **Default building**
  - On File menu
  - Lets you save/use partially filled out building
    - Your company name, etc.

TRICKS

- **Rotate windows/skylights**
  - Rotate manually
  - Determine worst-case orientation
    - HERS score, energy costs, design loads

TRICKS

Web Services

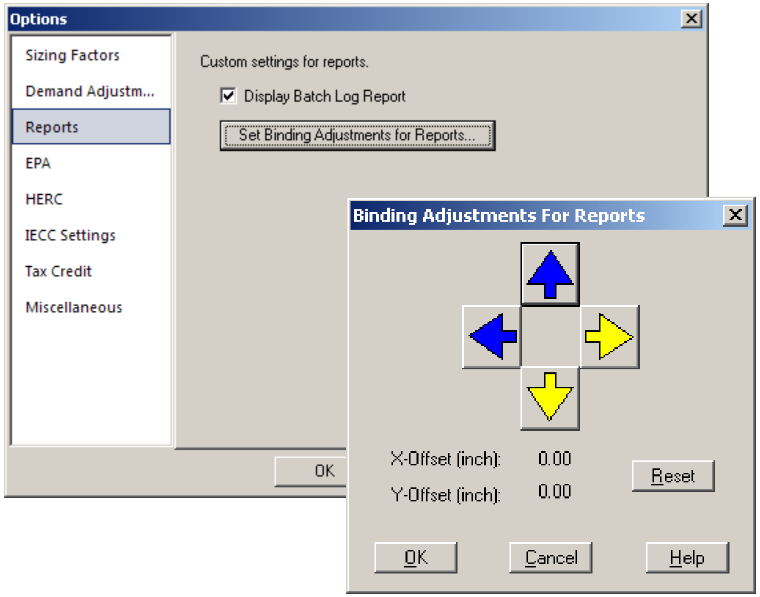
- Registration
  - ID/PW must be exact, use copy/paste
  - Need to re-register annually or semi-annually to advance expiration date
  - Your Provider’s expiration date can limit yours until she/he renews
- Downloading print permissions
  - Also done during registration

OPTIONS DIALOG

- Binding Adjustments
- Home Energy Ratings
- IECC
- EPA / ENERGY STAR
- Input Mode

OPTIONS DIALOG - REPORTS

- **Binding adjustments**
  - Only applies to the Old Reports tool
  - Slides text over on printed reports to allow for binding


Options
Sizing Factors
Demand Adjustm...
Reports
EPA
HERC
IECC Settings
Tax Credit
Miscellaneous
Set Binding Adjustments for Reports...
OK
Binding Adjustments For Reports
Reset
OK
Cancel
Help

Custom settings for reports.

☑ Display Batch Log Report

X-Offset (inch): 0.00

Y-Offset (inch): 0.00

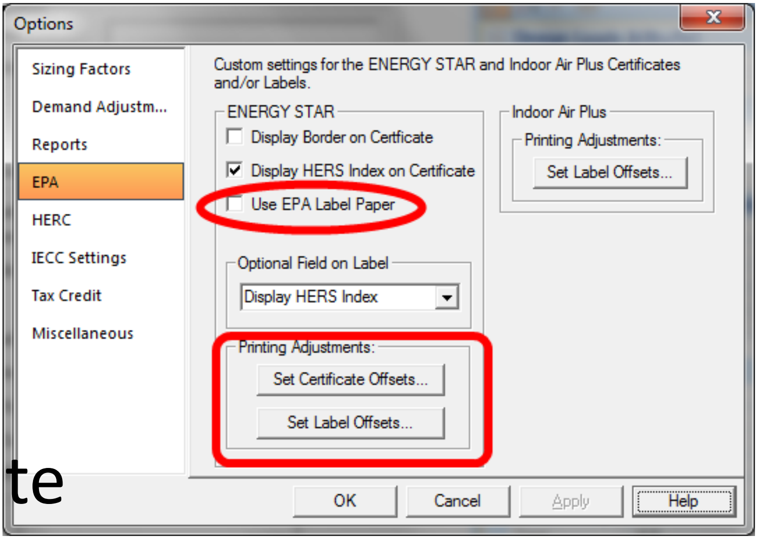
OPTIONS DIALOG - HERC

- **Home energy rating certificate**
  - HERS provider address
    - Appears in lower right corner
  - Criteria program check
    - Check if home meets energy codes imbedded in software
  - Disable regional criteria screen
    - Add program/regional criteria, check manually
  - Add signature line to report
    - For rater/provider to sign

OPTIONS DIALOG - IECC

- **IECC Toggles**
  - Standard Design SEER
    - Applies only to 2003 and prior codes
    - Set to SEER 10 or 13, shows on reports
  - IECC Equipment Efficiency
    - Uses Federal minimum equipment efficiency for 2009 & 2012 IECC reference homes
    - 2009 & 2012 IECC Performance Reports are unofficial when this checkbox is marked

OPTIONS DIALOG - EPA



Options

- Sizing Factors
- Demand Adjustm...
- Reports
- EPA
- HERC
- IECC Settings
- Tax Credit
- Miscellaneous

Custom settings for the ENERGY STAR and Indoor Air Plus Certificates and/or Labels.

ENERGY STAR

☐ Display Border on Certficate

☑ Display HERS Index on Certificate

☐ Use EPA Label Paper

Optional Field on Label: Display HERS Index

Printing Adjustments: Set Certificate Offsets... Set Label Offsets...

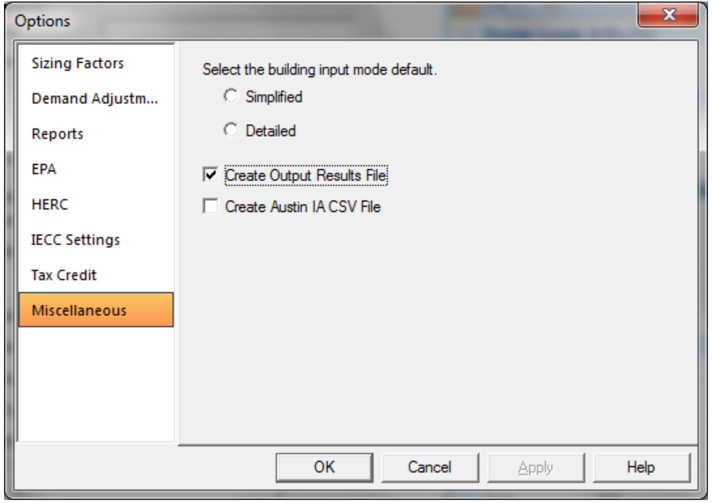
Indoor Air Plus

Printing Adjustments: Set Label Offsets...

- **ENERGY STAR certificate**
  - Include border on certificate
  - Add rating score to certificate/label
  - Checkbox to use EPA Label Paper with New Reports
  - Adjust printing offset for label (New or Old Reports)
    - All other printing adjustments apply only to Old Reports !

OPTIONS DIALOG - MISCELLANEOUS

- **Building Input Mode Default**
  - Selecting mode will bypass question when starting a new building
- **Enable output results file**
  - Comma-separated variable (csv) format
  - One file for each building file run
  - Same name as building file, *.csv
  - Toggle on/off


Options
Sizing Factors
Demand Adjustm...
Reports
EPA
HERC
IECC Settings
Tax Credit
Miscellaneous
OK
Cancel
Apply
Help

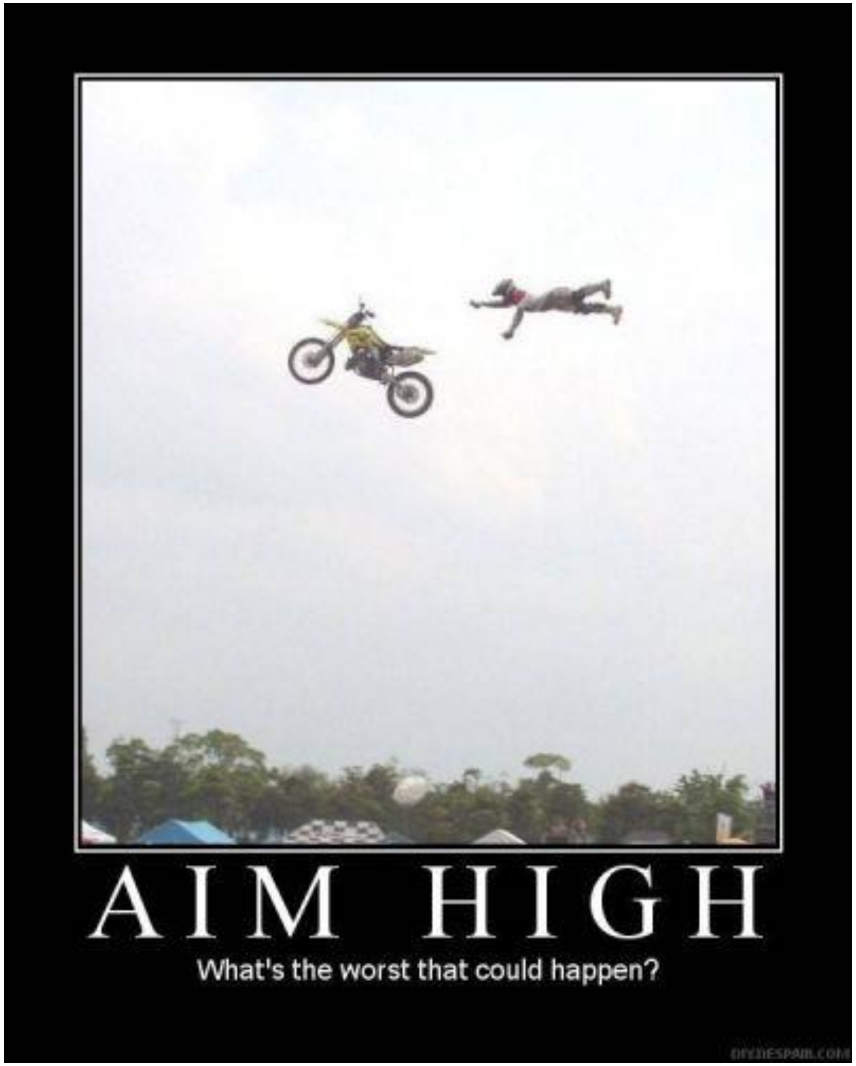
Select the building input mode default.
○ Simplified
○ Detailed

☑ Create Output Results File
☐ Create Austin IA CSV File

DISCUSSION – REM/*RATE* v15.0 AND BEYOND

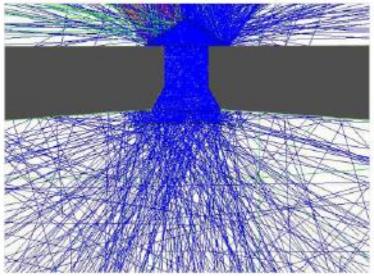
- **Goals:**
  - Streamlined report selection
  - New Improvement Analysis
  - RESNET Chapter 8 testing capabilities
  - QAD based reporting and control
  - Web based software – database driven

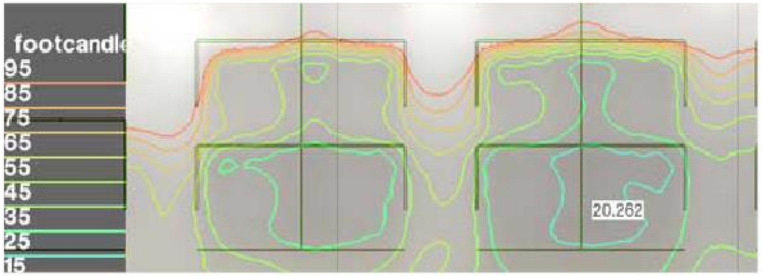
Q & A

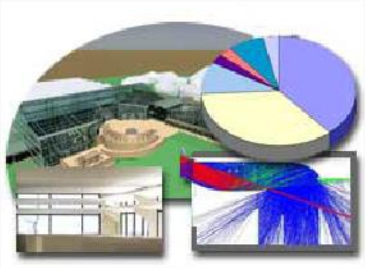

AIM HIGH
What's the worst that could happen?
DIYDESPAIR.COM

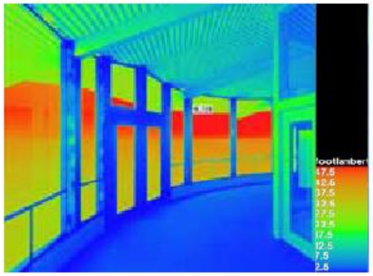
REM/*Rate*™
The Home Energy Rating Tool

PLASTIC




footcandle
95
85
75
65
55
45
35
25
15
20.262




footlambert
47.5
42.5
37.5
32.5
27.5
22.5
17.5
12.5
7.5
2.5