



Pacific Northwest
NATIONAL LABORATORY

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Streamlining Compliance

Building Energy Codes Program
REScheck and *COMcheck* software tools

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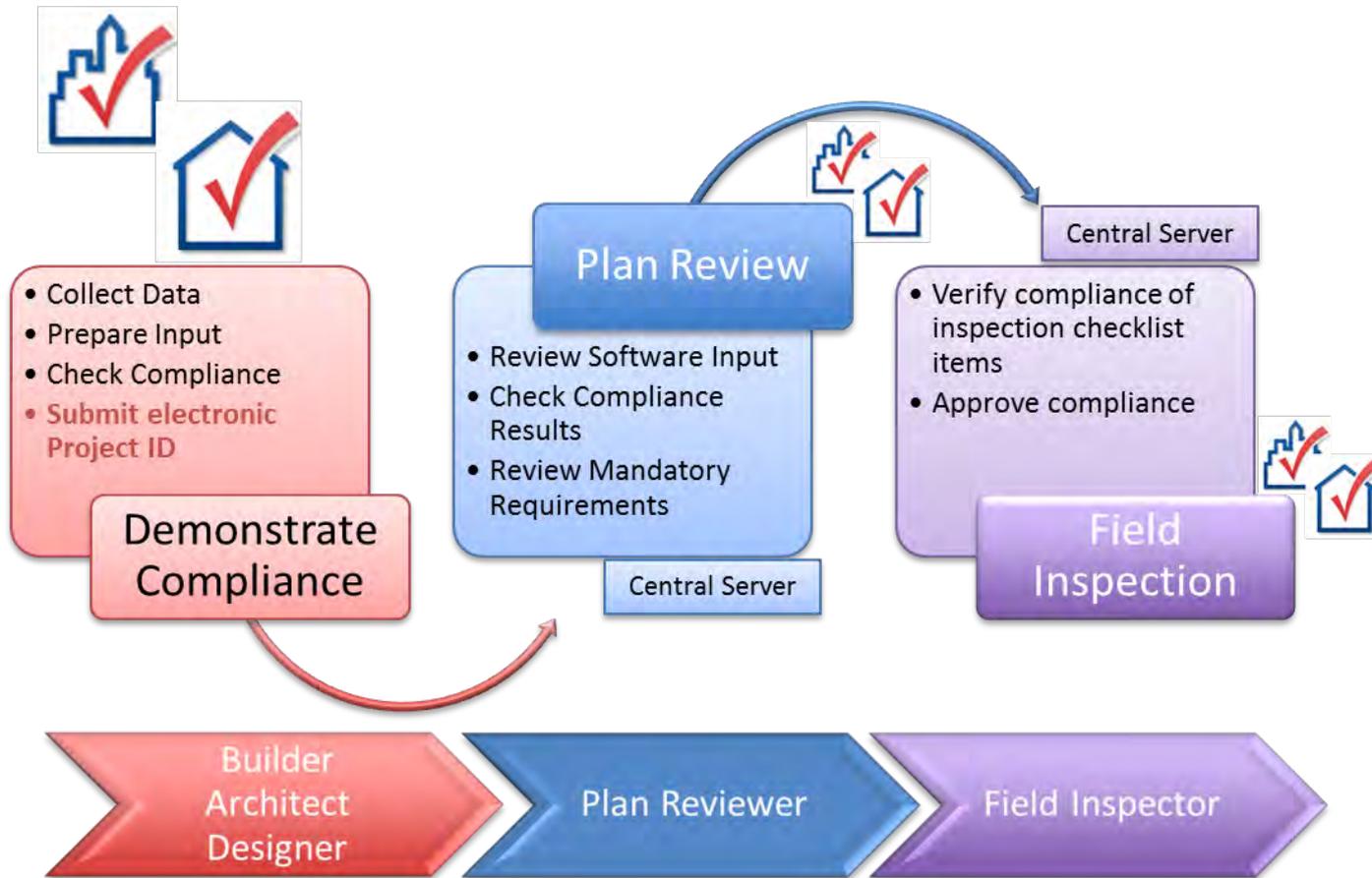
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Goals:

- ▶ Accelerate the adoption of new and more stringent energy codes and improve compliance rates
- ▶ Realign and enhance current BECP compliance tools and streamline the compliance process associated with using these tools
- ▶ Eliminate data duplication
- ▶ Maintain an audit trail
- ▶ Access projects and compliance determination data for analysis

Flow of Information



Dashboard

The screenshot shows the REScheck-Web dashboard interface. At the top, there is a navigation bar with tabs for 'PROJECTS', 'SEARCH', and 'ARCHIVE'. Below this is a row of action buttons: 'Plan Review', 'Field Inspection', 'Archive', 'History', and 'Report'. A 'Sort by' dropdown menu is set to 'Permit Number'. The main content area is a table with columns for Project ID, Permit Number, Current Status, Project Name, Location, Last Modified, and Project Type. The table contains 10 rows of project data. Red callout numbers 1 through 11 are overlaid on the image to highlight specific UI elements: 1 points to the 'SEARCH' tab, 2 to the 'ARCHIVE' tab, 3 to the 'Report' button, 4 to the 'Sort by' dropdown, 5 to the 'REScheck-Web' logo, 6 to the 'Archive' button, 7 to the 'Permit Number' dropdown, 8 to the 'Previous' button, 9 to the '1-10 of 23' pagination, 10 to the 'Reports' dropdown, and 11 to the 'Next' button.

Project ID	Permit Number	Current Status	Project Name	Location	Last Modified	Project Type	
1	2345	ABC-123-456	Inspector	Belanger	059 N 103rd St	01/21/14	Addition
2	6548	XYZ-321-654	Deficient	Shumater residence	2529 SW Cloverdale St	01/02/14	New
3	8977	MNO-456-123	Review	Cooperwelch-Townhouses	5732 17th Ave NE	02/05/14	Addition
4	6543	JKL-456-654	Deficient	Battlefield Homes	1903 32nd Ave S	12/01/14	New
5	9845	BWX-362-073	Review	Hoke Residence	1502 Naches Ave	02/05/14	Addition
6	1461	MLI-239-986	Submitted	Robert Mosey	2304 Dover St.	12/01/14	New
7	8907	WMF-375-388	Review	Gilmore Addition 2011	1815 Sagewood Loop	02/05/14	Addition
8	2353	QZD-358-278	Submitted	Triumph Homes	423 Greenbrook Pl	12/01/14	New
9	0993	IWO-385-237	Review	Lot 82 2 Trinity Way	256 Silver Meadows	02/05/14	Addition
10	3857	QND-345-235	Submitted	633 Monroe	1936 Fairway Dr	12/01/14	New

Search

REScheck-Web - 2009 ECC - Mozilla Firefox
https://energycode.pnl.gov/REScheckWeb/index.html

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PROJECTS **SEARCH** **ARCHIVE**

Project Name:

Permit Number:

Status:

Project Type:

Last Modified: Start Date: 08/01/1997 End Date: 07/03/1999

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

REScheck Web - 2009 IECC - Mozilla Firefox
https://energycode.pnl.gov/REScheckWeb/index.html

REScheck-Web™

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PROJECTS SEARCH **ARCHIVE** Reports

Row: [Plan Review](#) [Field Inspection](#) [Reactivate](#) [History](#) [Report](#)

Sort by: Permit Number

Previous 1-10 of 2054 Next

	Project ID	Permit Number	Current Status	Project Name	Location	Last Modified	Project Type
1	3454	EVW-532-4289	Inspection	Hazen Garage Addition	3105 San Jacinto St	03/12/02	Addition
2	7895	MEI-392-2928	Deficient	Jake Gillen Residence	6181 Preston Creek Ct	06/20/04	New
3	3464	EIS-893-9392	Review	Triumph Homes	11534 Hillcrest Rd	03/15/04	Addition
4	9482	QPF-924-3939	Deficient	White Plains	4318 Munger Ave	09/29/06	New
5	2462	TPX-935-2984	Review	Brown Residence	5950 Lindenshire Ln	10/14/08	Addition
6	8748	THS-894-2893	Submitted	Malibu Homes	2727 Reagan St	12/23/11	New
7	4810	POX-329-2904	Review	Charleston Homes	10001 Meadowbrook Dr	04/07/13	Addition
8	6647	OPI-290-2943	Submitted	Detmer Residence	6207 Walnut Hill Ln	03/09/12	New
9	2827	ZNO-290-3209	Review	Nutter Residence	4668 Wyoming St	07/10/10	Addition
10	6282	PZN-394-3973	Submitted	Connors Residence	4931 Homer St	04/11/09	New

Project History ?				
	Date	Report	Status	
1	01/02/2014	Plan Review - Deficiency Report	Rejected	
2	02/03/2014	Plan Review - Completion Report	Accepted	

» Close

Plan Review – Component Table

REScheck-Web - Wisconsin Uniform Dwelling Code 2009 - Mozilla Firefox
 https://energycode.pnl.gov/REScheckWeb/index.html

Split level Duplex - Enlarged Save Send For Revisions Submit For Inspection
 2012 IECC

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Dashboard PROJECT ENVELOPE MECHANICAL REQUIREMENTS Reports

Row: Comments

	Component	Assembly	Gross Area	Orientation	Cavity Insulation R-Value	Continuous Insulation R-Value	U-Factor	SHGC	Depth of Insulation	Wall Height	Depth Below Grade	Plans Verified
1	Ceiling 1	Flat Ceiling or Scissor Truss	844 ft ²		19	0	0.051					Unspecified
2	Wall 1	Wood Frame, 16" o.c.	327 ft ²	Front	19	0	0.06					Unspecified
3	Window 1	Vinyl Frame:Double Pane with Low-E	12 ft ²	Front			0.29	0.28				Complies
4	Door 1	Solid	20 ft ²	Front			0.18					Does Not Comply
5	Wall 2	Wood Frame, 16" o.c.	558 ft ²	Left Side	19	0	0.06					Complies
6	Window 2	Vinyl Frame:Double Pane with Low-E	36 ft ²	Left Side			0.29	0.28				Complies
7	Wall 3	Wood Frame, 16" o.c.	348 ft ²	Back	19	0	0.06					Complies
8	Window 3	Vinyl Frame:Double Pane with Low-E	39 ft ²	Back			0.29	0.28				Does Not Comply
9	Door 2	Glass	39 ft ²	Back			0.3	0.32				Complies
10	Wall 4	Wood Frame, 16" o.c.	558 ft ²	Right Side	19	0	0.06					Complies
11	Door 3	Solid	18 ft ²	Right Side			0.24					Complies
12	Basement Wall 1	Solid Concrete or Masonry	88 ft ²	Front	0	5	0.115		3.5 ft	3.5 ft	3 ft	Complies
13	Basement Wall 2	Solid Concrete or Masonry	126 ft ²	Left Side	11	5	0.055		3.5 ft	3.5 ft	3 ft	Does Not Comply
14	Basement Wall 3	Solid Concrete or Masonry	88 ft ²	Back	11	5	0.055		3.5 ft	3.5 ft	3 ft	Complies
15	Basement Wall 4	Solid Concrete or Masonry	126 ft ²	Right Side	11	0	0.076		3.5 ft	3.5 ft	3 ft	Complies

Plan Review – Component Comments Dialog

Update Plan Review Comments ?

DEFICIENCY CATEGORY

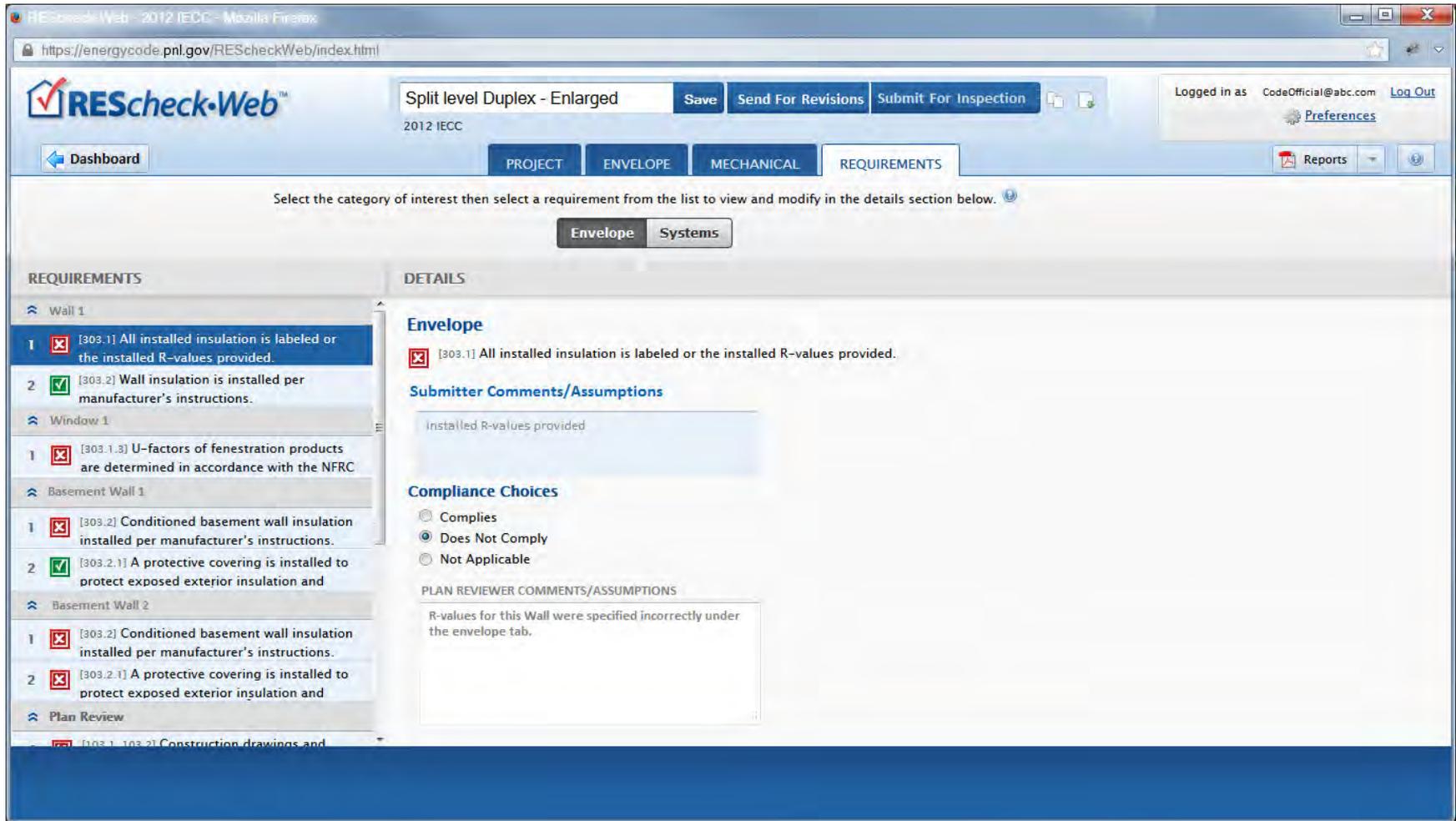
- Assembly selected did not match the plans
- Square footage is incorrect
- Insulation installation specified incorrectly
- Insulation value specified is incorrect

PLAN REVIEWER COMMENTS/ASSUMPTIONS

R-values for this Wall were specified incorrectly

» Update Plan Review Comments or Cancel

Plan Review – Requirements Tab Option 1



The screenshot displays the REScheck-Web application interface. At the top, the browser address bar shows the URL <https://energycode.pnl.gov/REScheckWeb/index.html>. The application header includes the REScheck-Web logo, the project name "Split level Duplex - Enlarged", and buttons for "Save", "Send For Revisions", and "Submit For Inspection". A user is logged in as "CodeOfficial@abc.com" with a "Log Out" button and a "Preferences" link. Navigation tabs for "PROJECT", "ENVELOPE", "MECHANICAL", and "REQUIREMENTS" are visible, with "REQUIREMENTS" being the active tab. Below the navigation, a message prompts the user to "Select the category of interest then select a requirement from the list to view and modify in the details section below." Two sub-tabs, "Envelope" and "Systems", are present, with "Envelope" selected. The left sidebar, titled "REQUIREMENTS", lists various categories and items, including "Wall 1", "Window 1", "Basement Wall 1", "Basement Wall 2", and "Plan Review". The "Wall 1" category is expanded, showing two items: item 1 with a red 'X' icon and item 2 with a green checkmark icon. The right pane, titled "DETAILS", shows the selected requirement: "[303.1] All installed insulation is labeled or the installed R-values provided." Below this, there is a "Submitter Comments/Assumptions" section with the text "Installed R-values provided". The "Compliance Choices" section shows three radio buttons: "Complies", "Does Not Comply" (which is selected), and "Not Applicable". At the bottom of the details pane, there is a "PLAN REVIEWER COMMENTS/ASSUMPTIONS" section with the text "R-values for this Wall were specified incorrectly under the envelope tab."

Plan Review – Requirements Tab Option 2

REScheck-Web - 2012 IECC - Mozilla Firefox
 https://energycode.pnl.gov/REScheckWeb/index.html

REScheck-Web™ Split level Duplex - Enlarged Save Send For Revisions Submit For Inspection
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Dashboard PROJECT ENVELOPE MECHANICAL REQUIREMENTS Reports

Select the category of interest then select a requirement from the list to view and modify in the details section below.

Row: Comments Envelope Systems

	Component	Requirement Description	Submission Comments	Verified
1	Wall 1			
2	303.1	All installed insulation is labeled or the installed R-values provided.	Installed R-values provided	Unspecified
3	303.2	Wall insulation is installed per manufacturer's instructions.		Unspecified
4	Window 1			Complies
5	303.1.3	U-factors of fenestration products are determined in accordance with the NFRC		Does Not Comply
6	303.1	All installed insulation is labeled or the installed R-values provided		Complies
7	Window 2			
8	303.1.3	U-factors of fenestration products are determined in accordance with the NFRC	U-factor values provided	Unspecified
9	303.1	All installed insulation is labeled or the installed R-values provided		Does Not Comply
10	Wall 4			
11	303.1	All installed insulation is labeled or the installed R-values provided.		Complies
12	Basement Wall 1			
13	303.2	Conditioned basement wall insulation installed per manufacturer's instructions		Complies
14	303.2.1	A protective covering is installed to protect exposed exterior insulation and		Complies
15	Basement Wall 2			

Plan Review – Requirement Comments Dialog

Update Plan Review Comments

Envelope

 [303.1] All installed insulation is labeled or the installed R-values provided.

Submitter Comments/Assumptions

Installed R-values provided

DEFICIENCY CATEGORY

- Assembly selected did not match the plans
- Square footage is incorrect
- Insulation installation specified incorrectly
- Insulation value specified is incorrect

PLAN REVIEWER COMMENTS/ASSUMPTIONS

R-values for this Wall were specified incorrectly

» Update Plan Review Comments or Cancel

Field Inspection – Component Table

REScheck-Web - Wisconsin Uniform Dwelling Code 2009 - Mozilla Firefox
 https://energycode.pnl.gov/REScheckWeb/index.html

REScheck-Web™ Split level Duplex - Enlarged Save Send For Revisions Complete
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Dashboard PROJECT ENVELOPE MECHANICAL REQUIREMENTS Reports

Row: Comments

Component	Assembly	Gross Area	Orientation	Cavity Insulation R-Value	Continuous Insulation R-Value	U-Factor	SHGC	Depth of Insulation	Wall Height	Depth Below Grade	Field Inspection Verified
1 Ceiling 1	Flat Ceiling or Scissor Truss	844 ft ²		19	0	0.051					Unspecified
2 Wall 1	Wood Frame, 16" o.c.	327 ft ²	Front	19	0	0.06					Unspecified
3 Window 1	Vinyl Frame:Double Pane with Low-E	12 ft ²	Front			0.29	0.28				Verified
4 Door 1	Solid	20 ft ²	Front			0.18					Reinspect
5 Wall 2	Wood Frame, 16" o.c.	558 ft ²	Left Side	19	0	0.06					Verified
6 Window 2	Vinyl Frame:Double Pane with Low-E	36 ft ²	Left Side			0.29	0.28				Verified
7 Wall 3	Wood Frame, 16" o.c.	348 ft ²	Back	19	0	0.06					Verified
8 Window 3	Vinyl Frame:Double Pane with Low-E	39 ft ²	Back			0.29	0.28				Verified
9 Door 2	Glass	39 ft ²	Back			0.3	0.32				Verified
10 Wall 4	Wood Frame, 16" o.c.	558 ft ²	Right Side	19	0	0.06					Verified
11 Door 3	Solid	18 ft ²	Right Side			0.24					Verified
12 Basement Wall 1	Solid Concrete or Masonry	88 ft ²	Front	0	5	0.115		3.5 ft	3.5 ft	3 ft	Reinspect
13 Basement Wall 2	Solid Concrete or Masonry	126 ft ²	Left Side	11	5	0.055		3.5 ft	3.5 ft	3 ft	Verified
14 Basement Wall 3	Solid Concrete or Masonry	88 ft ²	Back	11	5	0.055		3.5 ft	3.5 ft	3 ft	Verified
15 Basement Wall 4	Solid Concrete or Masonry	126 ft ²	Right Side	11	0	0.076		3.5 ft	3.5 ft	3 ft	Verified

Field Inspection – Component Comments Dialog

Update Field Inspection Comments

DEFICIENCY CATEGORY

- Assembly did not match compliance report
- Insulation installation does not match compliance report
- Insulation value does not match compliance report
- Insulation depth did not match compliance report

FIELD REVIEWER COMMENTS/ASSUMPTIONS

R-values for this wall specified in the plan do not match

» Update Field Inspection Comments or Cancel

Field Inspection – Requirements Tab Option 1

The screenshot displays the REScheck-Web application interface in a Mozilla Firefox browser window. The address bar shows the URL <https://energycode.pnl.gov/REScheckWeb/index.html>. The page title is "Split level Duplex - Enlarged". The user is logged in as "CodeOfficial@abc.com" and has access to "My Projects" and "Preferences".

The main navigation bar includes "Dashboard", "PROJECT", "ENVELOPE", "MECHANICAL", and "REQUIREMENTS" (which is currently selected). There are also "Save", "Send For Revisions", and "Complete" buttons. A "Reports" dropdown menu is visible on the right.

The interface is divided into two main sections: "REQUIREMENTS" and "DETAILS".

REQUIREMENTS

- Wall 1
 - 1 [X] [303.1] All installed insulation is labeled or the installed R-values provided.
 - 2 [✓] [303.2] Wall insulation is installed per manufacturer's instructions.
- Window 1
 - 1 [X] [303.1.3] U-factors of fenestration products are determined in accordance with the NFRC
- Basement Wall 1
 - 1 [X] [303.2] Conditioned basement wall insulation installed per manufacturer's instructions.
 - 2 [✓] [303.2.1] A protective covering is installed to protect exposed exterior insulation and
- Basement Wall 2
 - 1 [X] [303.2] Conditioned basement wall insulation installed per manufacturer's instructions.
 - 2 [X] [303.2.1] A protective covering is installed to protect exposed exterior insulation and
- Plan Review
 - [X] [103.1, 103.2] Construction drawings and

DETAILS

Envelope

[X] [303.1] All installed insulation is labeled or the installed R-values provided.

Submitter Comments/Assumptions

Installed R-values provided

Compliance Choices

- Verified
- Reinspect

FIELD INSPECTION COMMENTS/ASSUMPTIONS

R-values for this wall specified in the plan do not match

Field Inspection – Requirements Tab Option 2

REScheck-Web - 2012 IECC - Mozilla Firefox
 https://energycode.pnl.gov/REScheckWeb/index.html

REScheck-Web™ Split level Duplex - Enlarged Save Send For Revisions Complete

2012 IECC

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[My Projects](#) [Preferences](#)

[Dashboard](#) **PROJECT** **ENVELOPE** **MECHANICAL** **REQUIREMENTS** [Reports](#)

Row: [Comments](#) Select the category of interest then select a requirement from the list to view and modify in the details section below.

Envelope **Systems**

	Component	Requirement Description	Submission Comments	Verified
1	Wall 1			
2	303.1	All installed insulation is labeled or the installed R-values provided.	Installed R-values provided	Unspecified
3	303.2	Wall insulation is installed per manufacturer's instructions.		Unspecified
4	Window 1			Verified
5	303.1.3	U-factors of fenestration products are determined in accordance with the NFRC		Reinspect
6	303.1	All installed insulation is labeled or the installed R-values provided		Verified
7	Window 2			
8	303.1.3	U-factors of fenestration products are determined in accordance with the NFRC	U-factor values provided	Unspecified
9	303.1	All installed insulation is labeled or the installed R-values provided		Reinspect
10	Wall 4			
11	303.1	All installed insulation is labeled or the installed R-values provided.		Verified
12	Basement Wall 1			
13	303.2	Conditioned basement wall insulation installed per manufacturer's instructions		Reinspect
14	303.2.1	A protective covering is installed to protect exposed exterior insulation and		Verified
15	Basement Wall 2			

Field Inspection – Requirement Comments Dialog

Update Field Inspection Comments

Envelope

 [303.1] All installed insulation is labeled or the installed R-values provided.

Submitter Comments/Assumptions

Installed R-values provided

DEFICIENCY CATEGORY

- Assembly did not match compliance report
- Insulation installation does not match compliance report
- Insulation value does not match compliance report
- Insulation depth did not match compliance report

FIELD REVIEWER COMMENTS/ASSUMPTIONS

R-values for this wall specified in the plan do not match

[» Update Field Inspection Comments](#) or [Cancel](#)

Feedback and Suggestions

▶ [Open Dialogue]

Next Steps for BECP

- ▶ Consider all feedback and suggestions and begin implementing the changes in *REScheck-Web*
- ▶ Hold 1-2 additional feedback sessions before the end of September

Thanks

Thank you for participating!