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COMcheck for Oregon

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BUILDING TECHNOLOGIES PROGRAM

Pam Cole

www.energycodes.gov/comcheck/download.stm

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

Building Energy Codes Program

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Less Energy. Less Cost. Less Carbon.

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COMcheck™ for Windows®

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>>> [Download COMcheck for Windows® version 3.8.0](#)<<< (20MB)
runs on 2000, XP, Vista, Windows 7 in either single, multiuser, or network environment



Supported Codes:
IECC: 2000, 2001, 2003, 2004, 2006 and 2009.
ASHRAE/IES Standard 90.1: 2001, 2004 and 2007, and various state-developed energy codes.

State-Specific Versions
The generic COMcheck software includes the following state-specific energy codes: Georgia, New Hampshire, New York, Oregon, Vermont and Pima County, Arizona. **Standalone state-specific versions of COMcheck are no longer provided.**

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http://www.energycodes.gov/register.php?software=COMcheck&type=default&osversion=windo

Internet 100%

Desktop Software Tools



Windows version or
Mac version

Free

Web-Based Tools



Building System

Compliance Options

Envelope

Lighting

Mechanical

HVAC

SWH

Mandatory Provisions
(required for most compliance options)

Prescriptive Option

Trade Off Option

Total Building Performance

Energy Code Compliance

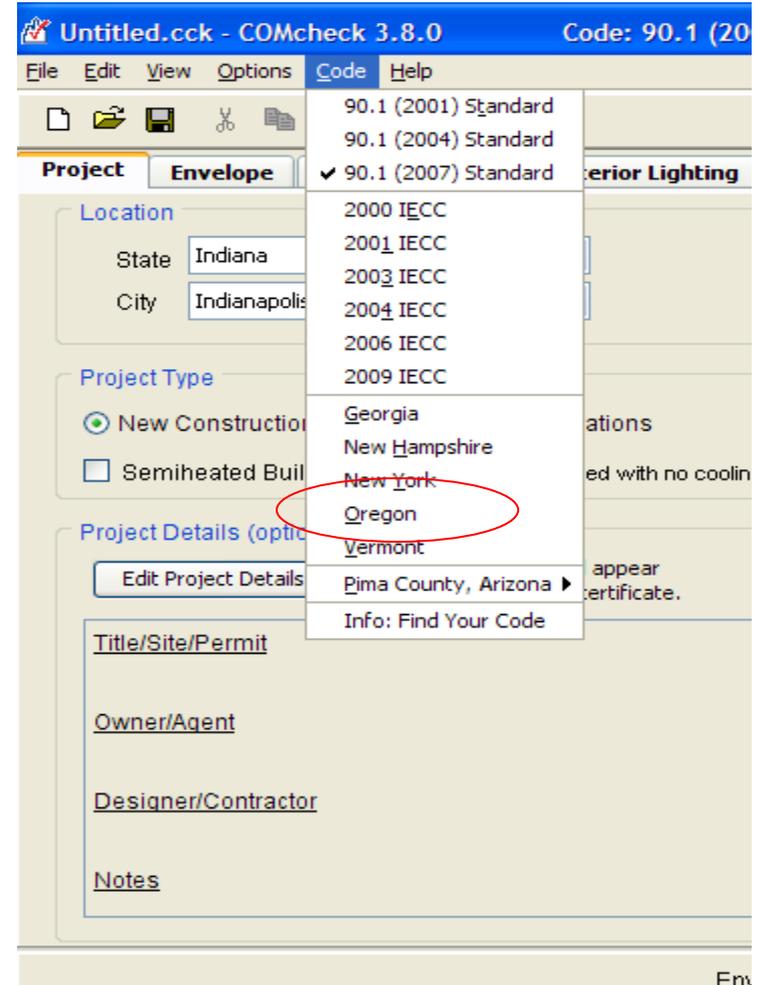


- Basic information about the builder and project
- Area take-offs for exterior walls, fenestration, roof/ceiling, basement walls, floors, etc.
- Insulation R-values, fenestration U-factors, etc.
- Lighting fixture details
- Heating and cooling system details
- Service water heating details

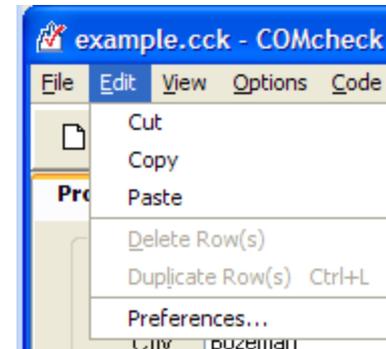
- Select the Appropriate Code
- Enter Project Information
- Enter Building Components
- Enter Interior/Exterior Lighting
- Enter Mechanical Equipment
- View/Print the Compliance Report(s)
- Save the Data File and the Report

Appropriate Code

- Energy code applicable to your state/ jurisdiction (Code Menu)
 - Status of State Codes
- Default
- Preferences



- Edit Menu
- General
 - File Options
 - Beyond Code Advisor
 - Version Update Check
- Project
 - Code/location
 - Envelope
- Applicant
 - Project Details
- Reports
 - Signatures
 - Email Reports



- Project location
- Project type (new construction, addition, alteration)
- Project details for report (optional)
 - Title/Site/Permit
 - Owner/Agent
 - Designer/Contractor

Project Screen

Untitled.cck - COMcheck 3.8.0 Code: Oregon Energy Efficiency Specialty Code

File Edit View Options Code Help

Compliance Method: Simplified Trade-Off

Project Envelope Interior Lighting Exterior Lighting Mechanical

Location

State: Oregon
City: Adair Village

Project Type

New Construction Addition Alterations

Project Details (optional)

Edit Project Details... This information will appear on the compliance certificate.

Title/Site/Permit

Owner/Agent

Designer/Contractor

Notes

Building Use

Building Area Method Area Category (Space-By-Space) Method

Add Delete Duplicate

	Building Type	Area Description	Area	W/ft2
1	Click to select building type.			

Exterior Lighting Areas

Exterior Lighting Zone: Other

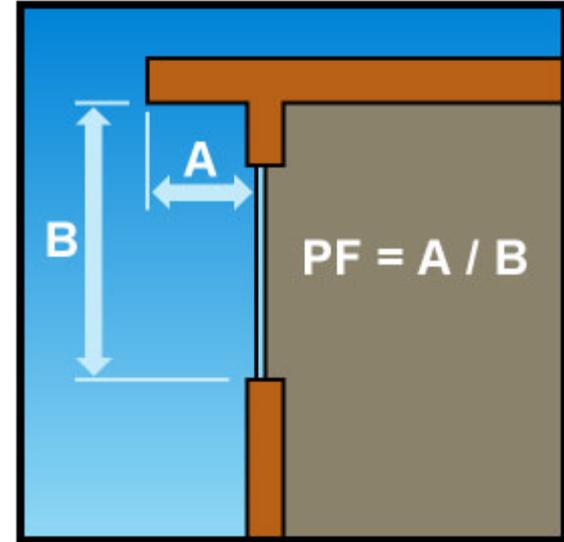
Add Delete Duplicate Help...

	Exterior Lighting Area	Area Description	Quantity	Units	W/ft2
1	Click to select area type.				

Envelope TBD Interior Lighting TBD Exterior Lighting TBD

- Only components that separate conditioned space from unconditioned space/outside air
- Only use applicable buttons
- Can group “like” components
- Use of “other” assembly type
- Gross area

- Projection Factor
 - Not in OR's code, but allowed when using *COMcheck*
- Orientation
 - Not mandatory but can help achieve greater fenestration



- Prescriptive
 - Max 30%
- Trade-off Approach
 - Above 40%
- Above 40%
 - Must use ASHRAE 90.1-2007 ECB with OR amendments

- Mandatory requirements
- Interior lighting power requirements
 - Complies if total connected power is less than interior lighting power allowance (entire building or partial building)



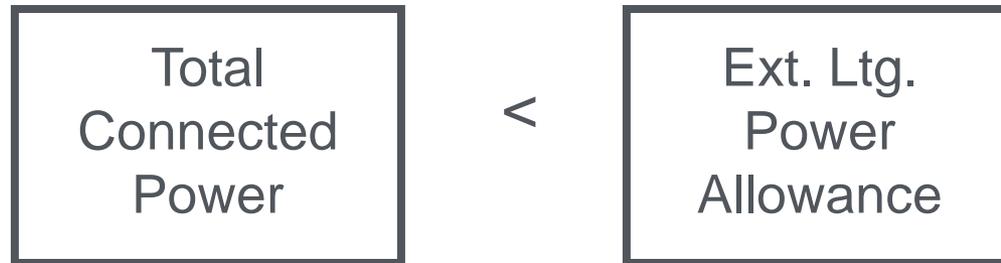
- LPDs based on Building Use on *Project* screen
- Add fixtures

	Component	Fixture ID	Fixture Description	Lamp Description/ Wattage Per Lamp	Ballast	Lamps Per Fixture	Number of Fixtures	Fixture Wattage
	Building	Allowed wattage = 17320 Proposed wattage = 12478						
1	Office (4520 sq.ft.)	Allowed wattage = 6780 Proposed wattage = 1976						
2	Incandescent 1	G	Recessed wall washer	Incandescent 150W		1	2	150
3	Incandescent 2	H	Accent track lighting	Incandescent 50W		1	5	50
4	Compact Fluorescent 1	F	Down light, twin tube	Twin Tube 18W	Magnetic	2	31	46
5	Convention, Conference or M	Allowed wattage = 630 Proposed wattage = 3900						
6	T8 / T12 Fluorescent 5	E	8 ft. Industrial, penda...	96" T8 75W	Electronic	2	30	130

- Identify exemptions and allowances (if applicable)

- Options menu
- Exemptions
 - Power for exempt fixtures is omitted from the **proposed wattage**
- Allowances
 - **Allowed wattage** for building increased by allowable amount
- Warning!
 - Make sure exemptions/allowances are chosen carefully

- Mandatory requirements
- Exemptions



- Pay attention to Quantity and Units

Exterior Lighting Areas

Add Delete Duplicate Help...

	Exterior Lighting Area	Quantity	Units	W/Unit	Tradable
1	Drive-up window	2	window(s)	400	No
2	Main entry/exit	4	ft of door ...	30	Yes
3	Parking area(s)	15000	ft2	0.15	Yes
4	Walkway < 10 feet wide	100	ft of walk...	1.0	Yes

- Tradable
 - Common applications where unused power can be traded where needed
- Non-Tradable
 - Less common applications that cannot be traded

- Works differently than Envelope and Lighting
- Enter characteristics of
 - HVAC system
 - Plant
 - Water heating
- Generates a customized list of requirements

- Must be met by all buildings
- Included in compliance report(s)
- Viewable in software Help

COMcheck Help

Back Forward Print

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- Beyond Code Advisor

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COMcheck File Menu Edit Menu View Menu Options Menu Context Menu

Welcome



COMcheck™

DOE's Building Energy Codes Program
Internet Address: www.energycodes.gov
Technical Support: techsupport@becp.pnl.gov



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Screen Operations

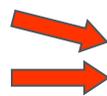
The screenshot shows the 'example.cck - COMcheck' application window. The 'Envelope' tab is selected, and the 'Window' sub-tab is active. A table lists 11 building components with their respective assembly, construction details, gross area, and energy performance metrics. The compliance bar at the bottom indicates that the Envelope PASSES, designed 5% better than code, and Interior Lighting is +28%.

	Component	Assembly	Construction Details	Gross Area		Cavity Insulation R-Value	Continuous Insulation R-Value	U-Factor	SHGC	Projection Factor
Building										
1	Roof 1	Non-Wood Joist/Rafter/T...		6112	ft2	0.0	26.1	0.037		
2	Skylight 1	Metal Frame, Double Pane	Glazing: Ti...	112	ft2			0.500	0.80	
3	Exterior Wall 1	Solid Concrete or Masonr...	Furring: M...	6000	ft2	22.0	0.0	0.114		
4	Door 1	Glass	Glazing: Cl...	42	ft2			0.700	0.58	0.00
5	Window 1	Metal Frame, Double Pan...	Glazing: Ti...	1500	ft2			0.600	0.63	0.00
6	Window 2	Metal Frame, Double Pane	Glazing: Cl...	56	ft2			0.700	0.72	0.00
7	Door 2	Overhead		288	ft2			0.140		
8	Door 3	Solid		40	ft2			0.200		
9	Interior Wall 2	Metal Frame, 16" o.c.		812	ft2	22.0	0.0	0.106		
10	Basement Wall 1	Solid Concrete or Masonr...	Furring: N...	2000	ft2		10.8	0.082		
11	Floor 1	Slab-On-Grade:Unheated	Insulation:...	160	ft		10.8			

Envelope PASSES: Design 5% better than Code Envelope +5% Interior Lighting +28%

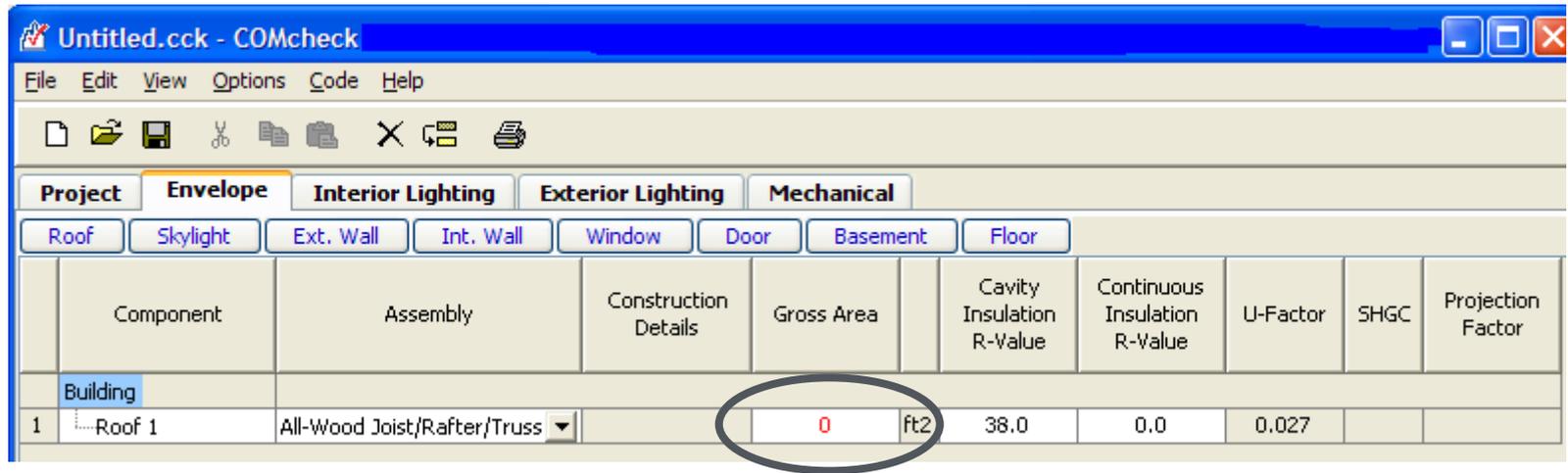
Use the 'Options' menu to add or remove orientation and daylighting control factor.

Compliance Bar
Status Bar



Screen Operations

- Compliance Bar
- Status Bar
- Colors - **Red**



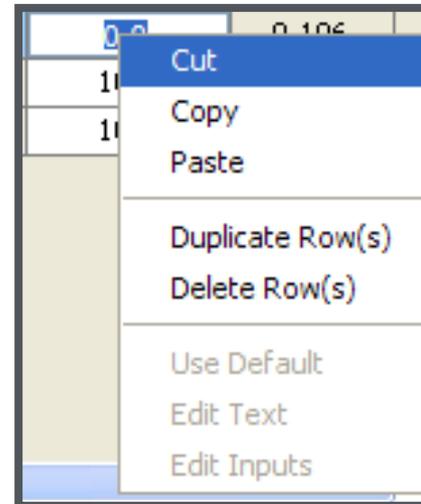
- Compliance Bar
- Status Bar
- Colors - **Green**



- Compliance Bar
- Status Bar
- Colors - **Blue**



- Compliance Bar
- Status Bar
- Colors
- Right Mouse Button
 - “Context” Menu



- Data (*File* ⇒ *Save*)
- Report (*File* ⇒ *Save Report*)
- Exchange



COMcheck-Web™

COMcheck-Web is the web-based version of the [COMcheck desktop software](#). It performs just like the desktop version, but you don't need to download or install any software on your computer.

Project Name: [» Save](#) [Download..](#)

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Technical Support: techsupport@becp.pnl.gov



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Loading...

Thank You



BECP Website:

www.energycodes.gov

Questions after the webcast:

www.energycodes.gov/help/helpdesk.php

