

For more information about the DOE Office of Building Technology, State and Community Programs, contact:

Energy Efficiency and Renewable Energy Clearinghouse (EREC)  
1-800-DOE-3732  
www.eren.doe.gov/buildings

Building Energy Codes Home Page:  
www.energycodes.gov

For more information on MECcheck™ contact:

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The IECC can be obtained from the International Code Council by calling 703-931-4533.

MECcheck™ materials can be ordered from DOE by calling 1-800-270-CODE or downloaded directly from the Web at:  
www.energycodes.gov/meccheck/download.stm

**HOTLINE:**  
1-800-270-CODE (2633)  
and  
**Tech Support:**  
techsupport@bec.pnl.gov



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### The trade-off worksheet approach

enables builders to vary insulation levels in the ceiling, wall, floor, basement wall, slab-edge, and crawl space; glazing and door areas; and glazing and door U-values. Based on the proposed plans and specifications, the builder enters simple information on a MECcheck™ worksheet, then hand-calculates a total “UA-value” for the project. By comparing the project’s UA-value to the value required for the climate zone, the builder can determine if the project passes the MEC requirements. If not, the builder can use the worksheet to examine a different combination of insulation levels, window or door products, and areas for compliance. The worksheet is suitable for use during the plan check and field inspection phases of the project.

### The MECcheck™ software approach

performs the same calculations as the trade-off worksheet but automates the procedure using a Windows-based software. Special features allow builders to trade off heating and air-conditioning equipment efficiency, as well as glazing and insulation. The software generates a report that is suitable for plan checking and field inspection.



### How can I get a copy of MECcheck™?

Download MECcheck™ printed materials and software at no cost from the Building Energy Codes (BEC) Program website: [www.energycodes.gov](http://www.energycodes.gov) or call the Energy Codes Hotline at 1-800-270-CODE (2633) to obtain a copy.

	Assembly	Gross Area or Slab Perimeter	Cavity Insulation R-Value	Continuous Insulation R-Value	U-Factor	UA	Depth of Insulation (ft)	
Building								
Ceiling 1	All-Wood Joist/Rafter/Trs	729	92	39.0	0.0	0.036	22	
Ceiling 2	All-Wood Joist/Rafter/Trs	592	92	30.0	0.0	0.035	21	
Exterior Wall	Wood Frame, 16" i.s.c.	1847	92	13.0	6.0	0.061	82	
Door 1	Glass	84	92			0.610	51	
Window 1	Vinyl Frame, Double Pan	204	92			0.450	32	
Door 2	Solid	20	92			0.540	11	
Exterior Wall	Wood Frame, 16" i.s.c.	276	92	13.0	0.0	0.062	21	
Door 3	Solid	93	92			0.350	6	
Floor 1	All-Wood Joist/Truss, On	938	92	19.0	0.0	0.047	44	
Floor 2	All-Wood Joist/Truss, On	32	92	30.0	0.0	0.033	1	
Slab 1	Uninsulated	82	9			0.779	64	2.0



## Buildings for the 21st Century

Buildings that are more energy-efficient, comfortable, and affordable...that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with State and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to States and communities for deployment of energy-efficient technologies and practices



BUILDING  
ENERGY CODES



# MECcheck™ MODEL ENERGY CODE COMPLIANCE MADE EASY



## Why use MECcheck™?

States, counties or cities may require compliance with the Council of American Building Officials (CABO) Model Energy Code (MEC) or the International Code Council International Energy Conservation Code (IECC) for new residential construction.

Financial guarantees through the Farmers Home Administration, Rural Economic and Community Development (Department of Agriculture) and Veterans Administration also require compliance with the MEC.

The MECcheck™ product group makes it fast and easy for designers and builders to determine whether new homes and additions meet the requirements of the MEC or the IECC. MECcheck™ also simplifies compliance determinations for building officials, plan checkers and inspectors. They can use MECcheck™ to quickly determine if a low-rise residence meets the code.



## What versions of MECcheck™ are available?

The MECcheck™ product group covers the 1992, 1993, and 1995 versions of the MEC and the 1998 and 2000 IECC. Jurisdictions governed by the 1989 MEC can generally use the 1992 products.

MECcheck™ has been specifically modified for Arkansas, Georgia, Massachusetts, Minnesota, New Hampshire, Vermont, New Jersey, New York, Wisconsin State Residential Codes; and Sustainable Energy Standard for Pima County, Arizona. In general, builders should contact their local building official or State energy office for permit requirements.



## How does MECcheck™ work?

The MECcheck™ product group offers three simple ways to demonstrate compliance with the MEC:

*The prescriptive approach*, the simplest of the three approaches, allows builders or designers to select from various combinations of energy conservation measures based on "climate zone" location. Each combination or "package" specifies insulation levels, glazing areas, glazing U-values (thermal performance), and sometimes heating and cooling equipment efficiency. By locating the correct climate zone and looking up the appropriate table of packages, builders and officials can ensure the project meets the specifications of one of the packages listed for that zone.