



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



TECHNICAL ASSISTANCE TO STATES: **RESIDENTIAL BUILDING CODE ADOPTION, IMPLEMENTATION, AND TRAINING**

The U.S. Department of Energy's (DOE) Office of Building Technology established the Building Energy Codes Program (BECP) to advance and advocate the energy-efficient and environmentally sound design and construction of buildings throughout the nation. The program assists states in adopting, implementing, and enforcing residential building energy codes.

The main benefit from efficient building energy codes is improved energy efficiency in the building sector. Other benefits include more disposable income for homeowners, lower operations and maintenance costs for building managers, reduced capacity needs for power generation, and lower emissions of environmental pollutants.

BECP provides products to make code compliance easier for designers, builders, product manufacturers, and code officials. The program also offers training materials and programs on the latest version of the International Code Council's International Energy Conservation Code (IECC) (formerly known as the Model Energy Code [MEC]) and on BECP's compliance products. Program staff can provide assessments comparing state energy codes with the IECC to determine impacts in energy efficiency. Some services require approval from DOE.



What products are available?

MECcheck™ is a family of products designed to help streamline the compliance process, allowing users to easily demonstrate and verify compliance with the IECC. The **MECcheck™** products include

- ✓ **Prescriptive Packages** – the simplest of the compliance approaches, allows users to select from “packages” of insulation and window requirements.
- ✓ **MECcheck™ Software** – the most flexible of the compliance approaches, runs on Windows and Macintosh computers.
- ✓ **MECcheck™ Package Generator** – a web-based tool that allows users to generate their own insulation and window packages based on their choice of insulation levels. Select the desired package and print or save a Compliance Report and Inspection Checklist.
- ✓ **Workbook** – provides guidance for both builders and enforcement personnel, including forms, worksheets, and checklists.
- ✓ **State-Specific Compliance Software and Materials** – designed for MEC-based state energy codes.

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

Website:
www.energycodes.gov

For more information on MECcheck™ contact:

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The Model Energy Code and the International Energy Conservation Code can be obtained from the Code organizations.

MECcheck™ materials can be ordered or downloaded directly from the web at:
www.energycodes.gov/meccheck/download.stm



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What training materials and programs are available?

The MECcheck™ training materials include PowerPoint slides, course notes, and a case study. Also available is a computer-based training which provides training and examples based on the MECcheck™ software.

Training programs available through BECP include Train-the-Trainer workshops that teach attendees how to use the training materials for their own training sessions and customized training on the IECC designed for code officials and builders.

Other training materials include videos that are designed for the building professionals, *Inspecting Houses for Model Energy Code Compliance* walks viewers through an on-site MEC inspection and *The MEC Made Easy: A Satellite Broadcast* showcases the ease of showing compliance with the 1992 MEC using the MECcheck™ software.



Can BECP assist in analyzing the impacts of state codes?

Yes, BECP can compare the impacts of the IECC with those of an existing or proposed state energy code in terms of energy efficiency. Program staff can evaluate the individual requirements within a state code, identifying strong and weak points, as well as proposed statewide energy codes.

BECP has also completed comparisons between existing national codes. The following code comparisons are located out on energycodes.gov website:

- ✓ **MEC 92-93:** 15-page publication describing the revisions to the 1992 MEC contained in the 1993 MEC.
- ✓ **MEC 93-95:** 23-page publication describing the revisions to the 1993 MEC contained in the 1995 MEC.

- ✓ **MEC 95-IECC 98:** 22-page publication describing the revisions to the 1995 MEC contained in the 1998 IECC.
- ✓ **IECC 98-00:** 2-page fact sheet describing the revisions to the IECC 1998 contained in the 2000 IECC.

When considering adopting an energy code such as the IECC, states are typically concerned about impacts to homeowners. BECP can assess these impacts, which include the first cost increase, mortgage cost impacts, annual energy cost savings, and net cash flow impacts for a typical new home.



What about other information or assistance?

The program provides resource information and reference data through the BECP web site. Information available through the web site include state energy code information –

- ✓ State Primary Technical Contact
- ✓ State Agency/Office Head
- ✓ Current Status
- ✓ Adoption Process
- ✓ Compliance Methods
- ✓ Enforcement
- ✓ Background/History
- ✓ SEP Grant History
- ✓ BECP Technical Assistance History
- ✓ Residential Construction Data
- ✓ Commercial Construction Data

Also, the report entitled, Building Energy Codes and Standards “101” that provides an overview of the codes process is available.

To learn more about the program's products and services, obtain printed publications for a nominal fee, or download the compliance software and training materials at no cost, visit the BECP web site at www.energycodes.gov/meccheck.