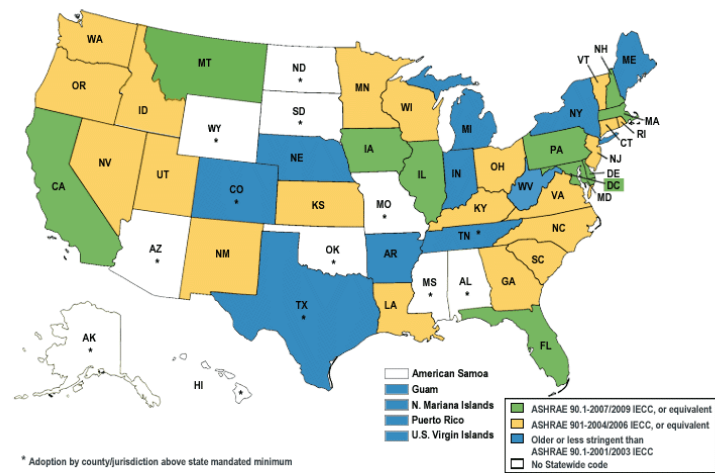




Energy Ratings and Standards: Enclos Participation in National Fenestration Ratings Council (NFRC) Programs

The National Fenestration Ratings Council (NFRC) was formed in 1989 by industry stakeholders to serve as a forum for the development and implementation of consensus based procedures for determining and rating the energy performance of windows, doors and other fenestration products. In the past two decades since its inception, residential and most recently commercial building codes have written the procedures of the NFRC into state laws regulating energy performance. With increasing national focus on energy policy and a growing breadth of NFRC procedures it is likely that the commercial construction industry can expect both an increase in rating requirements and stringency of codes in future years.



State Adoption of Energy Codes that Implement NFRC Procedures

The current status of state codes is outlined. States shaded with green or yellow color designate states which have adopted standards that specify provisions for NFRC testing to determine energy performance as the only alternative to design restricting default values that prevent the substantial use of vision area.

(COMPONENT MODELING APPROACH)
CMA TO REPLACE SB100 FOR COMMERCIAL FENESTRATION

New for this year, the NFRC has released the Component Modeling Approach (CMA) to supersede the previous “Site Built” 100 program that was adapted from its application to residential products. The significant change from the previous program is that individual product components from rated systems are entered into a database for future use and can be “mixed and matched” to form new rated systems. Manufacturers that pay applicable fees and employ an NFRC Approved Calculation Entity (ACE) are allowed access to the database and need not involve an Inspection Agency (IA) to obtain energy labels for systems composed of database components. This differs from the SB100 program which used a serial process for every rated system and allowed only minor alterations for re-issue of energy labels. A comparison of the CMA program to the previous SB100 program is depicted.

CMA IMPLICATIONS FOR ENCLOS AND CUSTOM CURTAIN WALL MANUFACTURERS

Manufacturers of custom curtain wall systems will see less benefit from the new system than those with standard product lines due to the fact that only components from previously rated systems can be used for future labels. The process of initial third party engineering analysis and testing for new components is very similar to that of the original program. Challenges to the program from industry stakeholders such as the AAMA, GANA, AEC and IGMA pertaining to the potential for increased costs of testing, standard product dimensions and rapid implementation schedule of the program have not been realized as changes to the program prior to its implementation.

CMA Adoption

Currently the California Energy Code (CEC) is the only building code that has made direct reference to the program. Since the CMA process has been added to the language of NFRC Procedure 100 it is likely that most state codes that currently reference NFRC testing will soon recognize the procedure as the method for obtaining energy ratings. The NFRC has voiced that CMA is a replacement and not an alternative to SB100.

Figure 1 (above). Status of commercial energy codes by state.

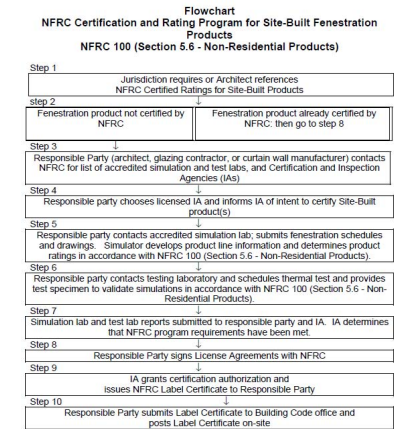
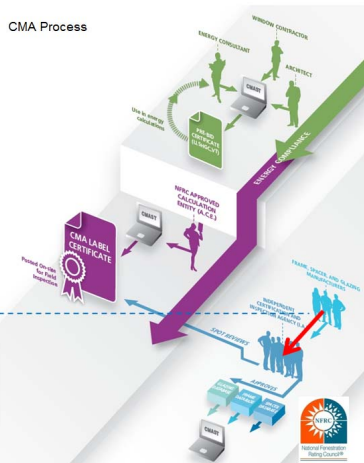


Figure 2 (above). A comparison of the CMA program to the previous SB100 program is depicted.



ENCLOS CORP. INVOLVEMENT

Measures at Enclos to prepare for these changes have included attendance at the NFRC spring meeting, training in CMA procedures and participation in NFRC subcommittee task groups.

CMA Training & Task Group Participation

In order to prepare for the future possibility of required compliance with energy codes that specify the CMA for product rating Enclos has participated in the required ACE training to interface the NFRC’s database for rated products and issue labels. Engineering is also now represented in subcommittee task groups for CMA complex products and will join the task group for commercial building annual energy performance upon its inception to represent Enclos interests in the development of NFRC procedures.

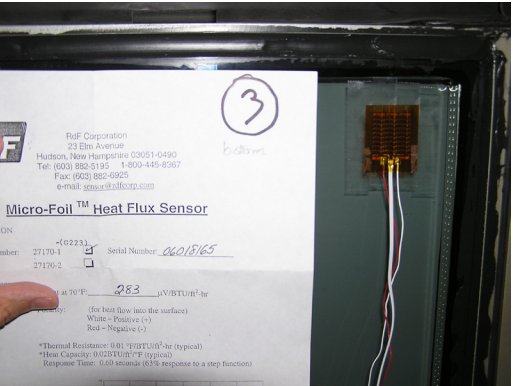


Figure 3. Thin Foil Heat Flux Sensor