**MHCC TELECONFERENCE ON DOE PROPOSED RULE**

**TO FACILITATE THE MHCC REVIEW OF THE DOE PROPOSED RULE ON ENERGY EFFICIENCY STANDARDS FOR MANUFACTURED HOUSING, THE FOLLOWING AREAS, ISSUES, AND QUESTIONS HAVE BEEN PREPARED FOR REVIEW AND CONSIDERATION.**

**HAS DOE ADEQUATELY CONSIDERED THE IMPACT OF THE PROPOSED RULE ON THE FUTURE AFFORDABILITY AND ACCESS TO CREDIT FOR LOW INCOME PURCHASERS? \*(45)**

**DOE PROJECTED AN AVERAGE RETAIL COST INCREASE OF 5% OR $2,226 FOR SINGLE SECTION HOMES AND $3,109 FOR A MULTI-SECTION HOMES. \*(43)**

**SHOULD DOE FURTHER REVISE ITS RETAIL COST IMPACT ANALYSIS BASED ON THE PAST INDUSTRY PROJECTED RETAIL COST MARK-UP FACTOR OF 2.30, RATHER THAN 1.67 FACTOR USED BY DOE IN ITS COST ANALYSIS? \*(62)**

**HAS DOE UNDER ESTIMATED THE REDUCTION IN PRODUCTION LEVELS AND FUTURE AVAILABILITY OF MANUFACTURED HOMES DUE TO IMPLEMETATION OF ITS PROPOSED STANDARDS?**

**DOE PROJECTIONS, BASED ON 2014 SHIPMENT DATA, WOULD SUGGEST A LOSS IN PRODUCTION AND AVAILABILITY OF OVER 40,000 HOMES OVER A 30 YEAR PERIOD USING A -0.48 ELASTICITY IN DEMAND FACTOR (AS PRICE GOES UP-DEMAND GOES DOWN). \*(46-50)**

**PAST HUD ESTIMATES OF ELASTICITY ON DEMAND OF USED A HIGHER FACTOR OF -2.40 WHICH WOULD SUGGEST A LOSS OF PRODUCTION OF OVER 200,000 HOMES OVER THE SAME 30 YEAR PERIOD. \*(46-50)**

**SHOULD DOE DEVELOP ENFORCEMENT REGULATIONS BEFORE ISSUING A FINAL RULE FOR ITS ENERGY STANDARDS? CURRENTLY, COMPLIANCE IS NOT COVERED IN THE PROPOSED RULE OR INCLUDED IN DOE’S COST ESTIMATES AND ANALYSIS. (P99-100, 152 of DOE Proposed Rule)**

**HUD HAS ENCOURAGED DOE TO ADOPT ITS ENFORCEMENT PROCEDURES FOR MANUFACTURED HOMES.**

**HAS DOE ADEQUATELY ADDRESSED THE IMPACT OF THE RULE ON SMALL MANUFACTURERS.**

**SMALL MANUFACTURERS MAY NOT BE ABLE TO COMPETE IN THE MARKETPLACE DUE TO ECONOMIES OF SCALE AFFORDED TO LARGE MANUFACTURERS THAT ARE ABLE TO PURCHASE MATERIALS IN VOLUME AT DISCOUNTED RATES NOT AVAILABLE TO SMALLER MANUACTURERS?**

**DOE COULD NOT CERTIFY THAT THE PROPOSED RULE WOULD NOT HAVE A SIGNIFICANT IMPACT ON SMALL MANUFACTURERS. (SEE REGULATORY FLEXIBILITY ANALYSIS IN PREAMBLE OF PROPOSED RULE) (P133 of DOE Proposed Rule)**

**SHOULD DOE USE 3 CLIMATE ZONES DIVIDED ALONG STATE LINES RATHER THAN THE 4 CLIMATE ZONES INDICATED IN ITS PROPOSED RULE FOR BIFURCATED CLIMATE ZONES 1 AND 2, DUE ONLY TO DIFERENT SOLAR GLAZING REQUIREMENTS? \*(16, 17, 19)**

**IF SO, WHICH SOLAR HEAT GAIN COEFICIENT SHOULD BE USED TO COMBINE CLIMATE ZONES 1 AND 2? THE MORE RESTRICTIVE 0.25 SOLAR COEFICIENT OR THE LESS RESTRICTIVE 0.33 FACTOR. \*(19)**

**SHOULD DOE CONSIDER MORE PRACTICAL ALTERNATIVES TO REQUIRING THE INSTALLATION OF FLOOR INSULATION IN THE BELLY AREA TO BE IN CONTACT WITH THE FLOOR DECKING? \*(23)**

**SHOULD DOE CONSIDER OTHER ALTERNATIVES FOR REQUIRING THE MINIMUM TRUSS HEEL HEIGHT TO BE 5-1/2 INCHES WHEN USING THE PRESCRIPTIVE OPTION FOR DETERMINING R VALUE AND U FACTOR DETERMINATIONS? \*(20)**

**SHOULD DOE REMOVE ITS PROPOSED LIMITATION OF 12% MAXIMUM GLAZING OF THE FLOOR AREA FOR THE PRESCRIPTIVE METHODS FOR R VALUE AND U FACTOR DETERMINATIONS? (P166 of the DOE Proposed Rule)**

**HAS DOE ADEQUATELY ADDRESSED THE POTENTIAL HEALTH AFFECTS ON INDOOR AIR QUALITY THAT MAY RESULT FROM SEVERAL PROPOSED MEASURES TO INCREASE THE TIGHTNESS AND THEREBY REDUCE NATURAL**

**AIR INFILTRATION THROUGH THE THERMAL ENVELOPE, WITH NO PROPOSED INCREASE IN MECHANICAL VENTILATION REQUIREMENTS? (P66,67, and DOE’s Draft Environmental Assessment)**

**ARE ALL OF THE MEASURES TO ENHANCE THE TIGHTNESS OF THE THERMAL ENVELOPE NEEDED TO ACHIEVE THE PROJECTED REDUCTION OF NATURAL AIR INFILTRATION FROM 8 AIR CHANGES PER HOUR TO 5 AIR CHANGES PER HOUR OR SHOULD OTHER BENCHMARKS BE CONSIDERED? \*(25)**

**THESE ENHANCED MEASURES TO TIGHTEN THE THERMAL ENVELOPE INCLUDE THE ADDITION OF A CONTINOUS AIR BARRIER; SEALING OF ALL GAPS AND PENETRATIONS IN CEILING WALLS, AND FLOORS; SEALING OF ROUGH OPENINGS AROUND WINDOWS, DOORS, AND SKYLIGHTS; SEALING OF AIR LEAKAGE FROM DUCTS TO LIMIT AIR LEAKAGE TO 4 CFM/100 SF; AND SEALING OF REGISTERS AND BOOT EXTENSIONS. (24, 25)**

**DOE PROPOSED ENERGY STANDARDS NEEDS TO CONSIDER THE FOLLOWING CONFLICTS OR DIFFERENCES WITH THE HUD STANDARDS.**

**UNDER THE DOE PROPOSAL THERE ARE FOUR CLIMATE ZONES THAT WOULD BE DELINEATED BY HOME SIZE THROUGHOUT AND BY COUNTY BOUNDARIES IN CLIMATE ZONES 1 AND 2. THE HUD STANDARDS HAVE THREE CLIMATE ZONES WITH SOME STATES LOCATED IN DIFFERENT CLIMATE ZONES THAN IN THE DOE PROPOSED RULE. \*(16, 17, 19))**

**UNDER THE DOE PROPOSAL, SPECIFIC REQUIREMENTS WOULD BE ESTABLISHED FOR THE INSTALLATION OF INSULATION INCLUDING PROVISIONS FOR UNIFORM DENSITY OR THICKNESS OF CEILING INSULATION AND FLOOR INSULATION TO BE IN CONTACT WITH THE FLOOR DECKING. THERE ARE NO CORRESPONDING REQUIREMENTS IN THE HUD STANDARDS. \*(20, 23)**

**UNDER THE DOE PROPOSAL, ENHANCED PROVISIONS WOULD BE ESTABLISHED FOR SEALING ALL SEAMS, JOINTS, AND PENETRATIONS OF THE BUILIDNG THERMAL ENVELOPE AGAINST AIR LEAKAGE, THE HUD STANDARDS CONTAIN EXEMPTIONS TO SEALING CERTAIN PENETRATIONS OF THE THERMAL ENVELOPE. \*(24)**

**UNDER THE DOE PROPOSAL, DEFAULT VALUES WOULD BE ESTABLISHED FOR FENESTRATION AND DOOR U FACTORS, SOLAR HEAT GAIN COEFICIENTS AND SKYLIGHTS. THE HUD STANDARDS ALLOW THE USE OF THE ASHRAE HANDBOOK OF FUNDEMENTALS OR DETERMINATION OF GLAZING VALUES USING AAMA OR NFRC TEST METHODS. \*(19) and 24 CFR § 3280.508(e)**

**UNDER THE DOE PROPOSAL, THERE ARE NO REQUIREMENTS FOR PROVIDING AND COMPLETING A HEATING AND COOLING CERTFICATE AS CURRENTLY REQUIRED BY THE HUD STANDARDS. (24 CFR § 3280.510 AND § 3280.511)**

**UNDER THE DOE PROPOSAL, ALL HEATING AND COOLING EQUIPMENT MUST BE SIZED IN ACCORDANCE WITH ACCA MANUALS S AND J. THE HUD STANDARDS DO NOT CURRENTLY REFERENCE THESE METHODS FOR DETERMING HEATING AND COOLING EQUIPMENT SIZING. \*(29)**

**UNDER THE DOE PROPOSAL, THERMOSTATS CONTROLLING HEATING AND COOLING SYSTEMS MUST BE CAPABLE OF MAINTAINING DIFFERENT SETBACK TEMPERATURES AT DIFFERENT TIMES OF THE DAY. THE HUD STANDARDS DO NOT HAVE ANY CORRESPONDING REQUIREMENTS. \*(26)**

**UNDER THE DOE PROPOSED RULE, FRAMING MEMBERS ARE NOT PERMITTED TO BE USED AS RETURN AIR DUCTS AS CURRENTLY ALLOWED IN THE HUD STANDARDS. (P170 of the DOE Proposed Rule)**

**UNDER THE DOE PROPOSAL, ALL HOT WATER PIPING OUTSIDE OF THE CONDITIONED SPACE AND FROM THE SERVICE WATER HEATING SYSTEM TO A DISTRIBUTION MANIFOLD WOULD BE REQUIRED TO BE INSULATED TO A MINIMUM VALUE OF R-3. THE HUD STANDARDS DO NOT HAVE REQUIREMENTS FOR INSULATING HOT WATER PIPING. \*(27)**

**WHAT COST IMPACT AND OTHER CONSIDERATIONS ARE ASSOCIATED WITH THE PROPOSAL TO REQUIRE PROGRAMABLE THERMOSTATS WITH SETBACK TEMPERATURE CONTROLS IN THE PROPOSED RULE? \*(26)**

**SHOULD DOE REQUIRE HEATING AND COOLING EQUIPMENT SIZING TO BE EXCLUSIVELY DETERMINED IN ACCORDANCE WITH ACCA MANUALS S AND J AS INDICATED IN DOE’S PROPOSED RULE? \*(29)**

**ARE CURRENT WHOLE HOUSE MECHANICAL FANS USED IN THE CURRENT PRODUCTION OF HUD CODE HOMES IN COMPLIANCE WITH THE MINIMUM EFFICACY REQUIREMENTS IN THE DOE PROPOSED RULE? \*(28)**

**\*( ) See DOE Summary – Energy Conservation Standards for Manufactured Housing, July 13, 2016**