

§ 434.501

404.5 *Swimming Pools.* All pool heaters shall be equipped with a readily accessible on-off switch.

404.5.1 Time switches shall be installed on electric heaters and pumps. Exceptions are as follows:

(a) Pumps required to operate solar or heat recovery pool heating systems.

(b) Where public health requirements require 24-hour pump operation.

404.5.2 Heated swimming pools shall be equipped with pool covers. Exception: When over 70% of the annual energy for heating is obtained from a site-recovered or site-solar energy source.

404.6 *Combined Service Water Heating and Space Heating Equipment.* A single piece of equipment shall not be used to provide both space heating and service water heating. Exceptions are as follows:

(a) The energy input or storage volume of the combined boiler or water heater is less than twice the energy input or storage volume of the smaller of the separate boilers or water heaters otherwise required or

(b) The input to the combined boiler is less than 150,000 Btuh.

Subpart E—Building Energy Cost Compliance Alternative

§ 434.501 General.

501.1 Subpart E permits the use of the Building Energy Cost Compliance Alternative as an alternative to many elements of subpart D. When this subpart is used, it must be used with subpart C and subpart D, 401.1, 401.2, 401.3.4 and in conjunction with the minimum requirements found in subsections 402.1, 402.2, and 402.3., 403.1, 403.2.1-7, 403.2.9 and 404.

501.2 *Compliance.* Compliance under this method requires detailed energy analyses of the entire Proposed Design, referred to as the Design Energy Consumption; an estimate of annual energy cost for the proposed design, referred to as the Design Energy Cost; and comparison against an Energy Cost Budget. Compliance is achieved when the estimated Design Energy Cost is less than or equal to the Energy Cost Budget. This subpart provides instructions for determining the Energy Cost Budget and for calculating the Design

10 CFR Ch. II (1–1–05 Edition)

Energy Consumption and Design Energy Cost. The Energy Cost Budget shall be determined through the calculation of monthly energy consumption and energy cost of a Prototype or Reference Building design configured to meet the requirements of subsections 401 through 404.

501.3 Designers are encouraged to employ the Building Energy Cost Budget compliance method set forth in this section for evaluating proposed design alternatives to using the elements prescribed in subpart D. The Building Energy Cost Budget establishes the relative effectiveness of each design alternative in energy cost savings, providing an energy cost basis upon which the building owner and designer may select one design over another. This Energy Cost Budget is the highest allowable calculated energy cost for a specific building design. Other alternative designs are likely to have lower annual energy costs and life cycle costs than those used to minimally meet the Energy Cost Budget.

501.4 The Energy Cost Budget is a numerical reference for annual energy cost. Its purpose is to assure neutrality with respect to choices such as HVAC system type, architectural design and fuel choice by providing a fixed, repeatable budget that is independent of any of these choices wherever possible (*i.e.*, for the prototype buildings). The Energy Cost Budget for a given building size and type will vary only with climate, the number of stories, and the choice of simulation tool. The specifications of the prototypes are necessary to assure repeatability, but have no other significance. They are not necessarily recommended energy conserving practice, or even physically reasonable practice for some climates or buildings, but represent a reasonable worst case of energy cost resulting from compliance with the provisions of subsections 401 through 404.

§ 434.502 Determination of the annual energy cost budget.

502.1 The annual Energy Cost Budgets shall be determined in accordance with the Prototype Building Procedure in § 434.503 and § 434.504 or the Reference Building Procedure in § 434.505. Both methods calculate an annual Energy