

fuel or energy or water, including but not limited to such charges as “demand charges,” “off-peak charges” and “seasonal charges.”

Demand charge means that portion of the charge for electric service based upon the plant and equipment costs associated with supplying the electricity consumed.

DOE means Department of Energy.

Energy conservation measures means measures that are applied to an existing Federal building that improve energy efficiency and are life cycle cost effective and that involve energy conservation, cogeneration facilities, renewable energy sources, improvements in operation and maintenance efficiencies, or retrofit activities.

Federal agency means “agency” as defined by 5 U.S.C. 551(1).

Federal building means an energy or water conservation measure or any building, structure, or facility, or part thereof, including the associated energy and water consuming support systems, which is constructed, renovated, leased, or purchased in whole or in part for use by the Federal government. This term also means a collection of such buildings, structures, or facilities and the energy and water consuming support systems for such collection.

Investment costs means the initial costs of design, engineering, purchase, construction, and installation exclusive of sunk costs.

Life cycle cost means the total cost of owning, operating and maintaining a building over its useful life (including its fuel and water, energy, labor, and replacement components), determined on the basis of a systematic evaluation and comparison of alternative building systems, except that in the case of leased buildings, the life cycle cost shall be calculated over the effective remaining term of the lease.

Non-fuel operation and maintenance costs means material and labor cost for routine upkeep, repair and operation exclusive of energy cost.

Non-recurring costs means costs that are not uniformly incurred annually over the study period.

Non-water operation and maintenance costs mean material and labor cost for routine upkeep, repair and operation exclusive of water cost.

Recurring costs means future costs that are incurred uniformly and annually over the study period.

Replacement costs mean future cost to replace a building energy system or building water system, an energy or water conservation measure, or any component thereof.

Retrofit means installation of a building energy system or building water system alternative in an existing Federal building.

Salvage value means the value of any building energy system or building water system removed or replaced during the study period, or recovered through resale or remaining at the end of the study period.

Study period means the time period covered by a life cycle cost analysis.

Sunk costs means costs incurred prior to the time at which the life cycle cost analysis occurs.

Time-of-day rate means the charge for service during periods of the day based on the cost of supplying services during various times of the day.

Water conservation measures mean measures that are applied to an existing Federal building that improve the efficiency of water use, reduce the amount of water for sewage disposal and are life cycle cost effective and that involve water conservation, improvements in operation and maintenance efficiencies, or retrofit activities.

[55 FR 48220, Nov. 20, 1990, as amended at 61 FR 32649, June 25, 1996]

§ 436.12 Life cycle cost methodology.

The life cycle cost methodology for this part is a systematic analysis of relevant costs, excluding sunk costs, over a study period, relating initial costs to future costs by the technique of discounting future costs to present values.

§ 436.13 Presuming cost-effectiveness results.

(a) If the investment and other costs for an energy or water conservation measure considered for retrofit to an existing Federal building or a building energy system or building water system considered for incorporation into a new building design are insignificant, a Federal agency may presume that such

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a system is life cycle cost-effective without further analysis.

(b) A Federal agency may presume that an investment in an energy or water conservation measure retrofit to an existing Federal building is not life cycle cost-effective for Federal investment if the Federal building is—

(1) Occupied under a short-term lease with a remaining term of one year or less, and without a renewal option or with a renewal option which is not likely to be exercised;

(2) Occupied under a lease which includes the cost of utilities in the rent and does not provide a pass-through of energy or water savings to the government; or

(3) Scheduled to be demolished or retired from service within one year or less.

[55 FR 48220, Nov. 20, 1990, as amended at 61 FR 32650, June 25, 1996]

§ 436.14 Methodological assumptions.

(a) Each Federal Agency shall discount to present values the future cash flows established in either current or constant dollars consistent with the nominal or real discount rate, and related tables, published in the annual supplement to the Life Cycle Costing Manual for the Federal Energy Management Program (NIST 85-3273) and determined annually by DOE as follows—

(1) The nominal discount rate shall be a 12 month average of the composite yields of all outstanding U.S. Treasury bonds neither due nor callable in less than ten years, as most recently reported by the Federal Reserve Board; and

(2) Subject to a ceiling of 10 percent and a floor of three percent the real discount rate shall be a 12 month average of the composite yields of all outstanding U.S. Treasury bonds neither due nor callable in less than ten years, as most recently reported by the Federal Reserve Board, adjusted to exclude estimated increases in the general level of prices consistent with projections of inflation in the most recent Economic Report of the President's Council of Economic Advisors.

(b) Each Federal agency shall assume that energy prices will change at rates projected by DOE's Energy Information

Administration and published by NIST annually no later than the beginning of the fiscal year in the Annual Supplement to the Life Cycle Costing Manual for the Federal Energy Management Program, in tables consistent with the discount rate determined by DOE under paragraph (a) of this section, except that—

(1) If the Federal agency is using component prices under § 436.14(c), that agency may use corresponding component escalation rates provided by the energy or water supplier.

(2) For Federal buildings in foreign countries, the Federal agency may use a "reasonable" escalation rate.

(c) Each Federal agency shall assume that the price of energy or water in the base year is the actual price charged for energy or water delivered to the Federal building and may use actual component prices as provided by the energy or water supplier.

(d) Each Federal agency shall assume that the appropriate study period is as follows:

(1) For evaluating and ranking alternative retrofits for an existing Federal building, the study period is the expected life of the retrofit, or 25 years from the beginning of beneficial use, whichever is shorter.

(2) For determining the life cycle costs or net savings of mutually exclusive alternatives for a given building energy system or building water system (e.g., alternative designs for a particular system or size of a new or retrofit building energy system or building water system), a uniform study period for all alternatives shall be assumed which is equal to—

(i) The estimated life of the mutually exclusive alternative having the longest life, not to exceed 25 years from the beginning of beneficial use with appropriate replacement and salvage values for each of the other alternatives; or

(ii) The lowest common multiple of the expected lives of the alternative, not to exceed 25 from the beginning of beneficial use with appropriate replacement and salvage values for each alternative.

(3) For evaluating alternative designs for a new Federal building, the study period extends from the base year