

565—6.1(473) General. Building energy management programs are established for public and private schools, merged area schools, area education agencies, cities, counties and other political subdivisions, hospitals, health care facilities, private colleges, nonprofit organizations, and the state and state agencies to reduce energy consumption and energy costs. These programs are established under Iowa Code sections 473.13A and 473.19 and Iowa Code Supplement section 473.20 and follow the guidelines of 10 CFR 420 (1976).

The state of Iowa and its agencies, public schools, merged area schools, area education agencies, cities, counties and other political subdivisions of the state are required to identify and implement through energy audits and technical engineering analyses all cost-effective energy management improvements for which the building energy management programs make financing available. Private schools and colleges, hospitals, health care facilities, and nonprofit organizations are also authorized and encouraged to participate in building energy management programs.

These programs are administered by the energy and geological resources division of the Iowa department of natural resources.

These programs are carried out by:

1. Conducting energy audits as needed on buildings and facilities owned or leased by mandated and eligible institutions;
2. Implementing operation and maintenance procedures;
3. Conducting technical engineering analyses as needed to identify energy management improvements;
4. Establishing an energy bank and energy loan program;
5. Funding or arranging financing for cost-effective energy management improvements;
6. Establishing energy accounting procedures; and
7. Providing for appeals and reporting measures.

6.1(1) Purpose and scope. This chapter establishes requirements for eligibility, and procedures for conducting an energy audit, conducting a technical engineering analysis, establishing a loan program, funding and arranging financing for cost-effective energy management improvements, and providing for possible appeals and enforcement measures.

6.1(2) Definitions. For the purpose of these rules:

“*Analyst*” means a licensed professional engineer or architect in the state of Iowa who has satisfied the requirements for being placed on the department’s list of qualified analysts as set out in the department’s technical engineering analysis guidelines.

“*Aggregate simple payback period*” means the total estimated cost of all studied and recommended energy management improvements in a building or facility, divided by the total estimated annual energy cost savings.

“*Btu*” means British thermal units, units of energy measurement.

“*Building*” means any structure that is heated, cooled, or lighted.

“*Cost-effective*” means that an energy management improvement or package of energy management improvements will, within the useful life of the improvement(s), generate savings sufficient to pay for the total costs of implementing the improvement(s). Under no circumstances is any improvement or package of improvements cost-effective if the time needed for the savings to pay for the improvement(s) exceeds the expected remaining useful life of the building or facility in which the improvement(s) is implemented.

“*Degree day*” means a unit of measure that is used to help describe the effect of weather severity on the amount of energy needed for heating or cooling a building. A degree day represents the difference between a given base temperature (usually 65° Fahrenheit) and the mean daily temperature (average of the daily maximum and minimum air temperatures). One heating (or cooling) degree day is accumulated for each whole degree that the daily mean temperature is below (or above) the base temperature. The more extreme the weather, the higher the number of degree days (either daily or annual totals).

“*Department*” means the department of natural resources.

“Energy accounting system” means a computerized or manual mechanism that allows facilities to track, at a minimum, their monthly energy consumption by unit and cost per square foot, and Btu per square foot per degree day.

“Energy audit” means an energy survey of a building that is conducted by means of a walk-through during a visit to the building or facility in accordance with requirements of rule 6.3(473).

“Energy auditors” means paraprofessionals, approved by the department, trained and qualified in energy auditing and in identifying energy management improvements. This includes certified energy managers as designated by the Association of Energy Engineers.

“Energy management improvement” means construction, rehabilitation, acquisition, or modification of an installation, of any of the fixtures, or of any of the equipment in a building or facility, which is intended to reduce energy consumption or energy source, and which may contain integral control and measurement devices.

“Expected remaining useful life of a building or facility” means the time period planned or estimated until the building or facility is abandoned, demolished, or fundamentally rebuilt to the extent that its basic function is altogether changed. This time period is determined and explained in the report of the energy audit or technical engineering analysis conducted for each mandated and eligible institution participating in a building energy management program.

“Facility” means any structure, system or processing site that consumes energy to carry out a function or service of a mandated or eligible institution, including its installed energy-consuming machinery.

“Health care facility” means an institution as defined in Iowa Code section 139A.1(10).

“Hospital” means an institution that is licensed and regulated under Iowa Code chapter 135B.

“Local government” means any city, county, municipality, or any other political subdivision of the state of Iowa.

“Mandated and eligible institutions” means (1) the state, state agencies, political subdivisions of the state, school districts, area education agencies, and community colleges that are required under Iowa Code section 473.13A to identify and implement, through energy audits and technical engineering analyses, all energy management improvements for which financing is made available by the department; and (2) private schools and colleges, hospitals, health care facilities, and other nonprofit organizations that are authorized and encouraged to also participate in building energy management programs.

“Operation and maintenance procedures” means the routine functioning and upkeep of a facility that consume energy as they are performed. Energy savings from operation and maintenance procedures are obtained when low- or no-cost measures are taken to improve the efficiency of such things as worker schedules and facility occupancy schedules, thermostat settings, hot water temperatures and usage, building envelope sealing and regular facility repairs, scheduled equipment repairs and servicing, equipment power optimization, and facility lighting levels.

“School” means any public school district, area education agency, or merged area school (public community colleges and vocational/technical schools) which is defined by the department of education administrative rules in 281—Chapter 1.

“Simple payback period” means the time required for the cumulative savings from an energy management improvement project to recover its initial investment cost and other accrued costs, without accounting for the time-value of money. It is calculated by dividing the estimated total costs of acquiring the materials and installation for the implementation of an energy management improvement by the estimated annual savings for the energy management improvement. For renewable and coal conversions, savings are based on the fuel replaced.

“Square feet” means the total gross conditioned floor area of a building or facility.

“Technical engineering analysis” means the thorough examination of, and written report for, a building or facility, conducted in accordance with the current guidelines established by the department. A technical engineering analysis identifies energy management improvement opportunities, including operations and maintenance improvements, with estimated costs of the improvements broken down by materials and installation costs, estimated annual cost savings by fuel type, and calculated simple payback periods. The analysis report is signed and certified by an analyst who is employed by a firm

on the list of qualified engineering/architectural firms that is maintained by the department and updated periodically according to the most current guidelines established by the department.

“Useful life” or *“service life”* means the time period an energy management improvement is estimated to last until it wears out, needs to be replaced, or no longer performs the function for which it is intended. This also means the time during which a particular system or component of a system remains in its original service application.