

Section 1
State Energy Efficiency Design
(SEED) Program Overview

It is the policy of the State of Oregon that facilities to be constructed or purchased by authorized state agencies be designed, constructed, renovated and operated so as to minimize the use of nonrenewable energy resources and to serve as models of energy efficiency.

(ORS 276.900, see Appendix A)

The State Energy Efficiency Design (SEED) program administered by the Oregon Department of Energy was created to implement the legislation quoted above, ORS 276.900.

By constructing and renovating buildings with energy efficiency in mind, state agencies can significantly reduce long-term operating costs. Those savings can be used to fund essential services. Other benefits of energy efficiency are reducing environmental impacts.

OAR 330-130 (Appendix B) and these Guidelines put an emphasis on *the introduction of energy issues during the Pre-Design and Schematic Design phases* of the design process. It is during these two phases when large energy savings can be achieved with the least amount of efforts. These Guidelines also include a description of the *verification* of the energy conservation measures' installation and *long term monitoring* during the occupancy phase.

I. INTRODUCTION

Adopted in 1991, ORS 276.900-915 directs state agencies to work with the Oregon Department of Energy to ensure that cost-effective energy conservation measures (ECMs) are included in new and renovated state buildings.

OAR 330-130 was amended substantially in the fall of 2001 as a result of HB3788, which among other things, requires that a facility constructed or renovated after June 30, 2001 shall exceed the energy conservation provisions of the state building code by 20 percent or more. Additional minor amendments to OAR 330-130 were filed in November 2002 and January 2003.

This document provides state agency staff, building design team members, and Energy Analysts detailed information on the SEED Program:

- Section 1 provides an overview of the program and includes the building class determination and notification procedures.
- Section 2 describes the procedures for Class 1 buildings.

- Section 3 describes the procedures for Class 2 buildings.
- Appendices A through L contain law, rules, and a variety of forms and descriptions of procedures.

II. PROGRAM PARTICIPANTS

The SEED Program includes the following participants (with a brief description of their roles):

- *Agency* is any state agency, board, commission, department, or division that has the authority to finance the construction, purchase, or renovation of buildings or other structures for use by the state of Oregon.
- The *Agency Contact* acts for the Agency and is responsible for Agency compliance with the SEED Program requirements.
- The *Design Team* includes the architect(s), engineer(s), and other professionals responsible for the building design. The design team possesses the most knowledge about the building requirements, provides building data to the Energy Analyst, and verifies that suggested energy conservation measures (ECMs) can be cost-effective and practical to implement.
- The *Energy Analyst* has expertise in analyzing energy savings and ECM costs. The Energy Analyst prepares the building energy analysis and the Energy Analysis Report under the direction of a professional engineer or licensed architect who reports to the project architect or Agency. Appendix C gives requirements and recommended Energy Analyst qualifications.
- The *Department of Energy* or its representative provides information to the Agency and design team to improve energy efficiency, reviews the Energy Analysis Report, and reports on Agency compliance with the SEED Program. The *Department of Energy* or its representative participates in design team meetings, provides on-site inspections, and may be involved in the monitoring of the building during the occupancy phase.

III. BUILDING CLASSES

All buildings designed, constructed, and renovated by state agencies are required to comply with the SEED Program requirements. When the building class has been determined as being *Class 1* or *Class 2* during the pre-design or programming phase of a building project, the Agency notifies the *Department of Energy*.

Class 1 buildings include the following:

- New buildings, additions, or renovations of 10,000 or more square feet of heated or cooled floor area
- Building additions that increase the size of an existing building to 10,000 or more square feet of heated or cooled floor area, and renovations to buildings of 10,000 or more square feet of heated or cooled floor area, which significantly affect either:
 - i) The existing mechanical or control system; or
 - ii) At least two of the following energy systems: interior lighting, building envelope, the domestic hot water system, or special equipment that uses energy.

Note: Only those systems identified in i) and ii) that are *significantly affected* are subject to Class 1 building procedures. For example: if a lighting system is upgraded, only the lighting system has to meet the 20% lower than code, not the whole building.

Class 2 buildings include new buildings or renovations of less than 10,000 square feet of heated or cooled floor area, except:

- Those described as Class 1 buildings; or
- New buildings, structures, or facilities that have no energy-using systems.

The process for the SEED Program is outlined in Figure 1-1.

IV. NOTIFICATION

Prompt notification to the *Department of Energy* benefits the Agency by providing timely program planning and scheduling. The Agency determines during the pre-design or programming phase whether the project is a Class 1 or Class 2 project. The Agency completes and submits the appropriate Project Notification Form (see Appendix G and K) to the *Department of Energy* before the design team is selected. Agencies are encouraged to talk with *Department of Energy* staff before completing this form to discuss building classes defined under the SEED Program, Agency options, and *Department of Energy* services.

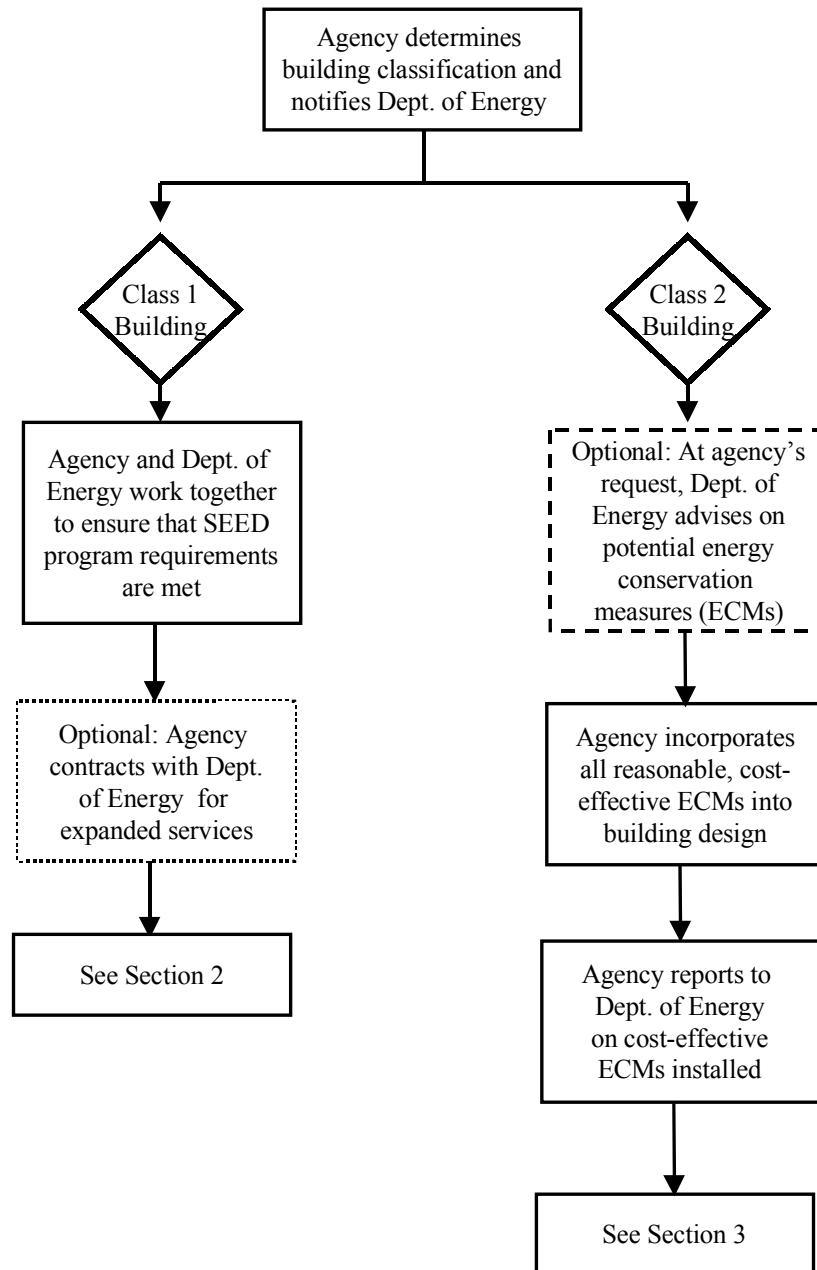
V. SUBMITTALS

The Class 1 building designation under the SEED Program requires that meetings be held to discuss the energy goals of the project, the design criteria, the integrated energy design approach, Energy Systems Performance Verification Plan, modeling approach and ECMs related to the building design. Required document submittals, addressed in the Section 2, must be made early to allow adequate time for review. This will result in more productive meetings.

The Class 2 building designation under the SEED Program requires that the Agency submit to the Oregon *Department of Energy* a list of all ECMs or ECM packages installed in the building. These measures include all the required prescriptive ECMs or all reasonable cost-effective ECMs.

All submittals to the *Department of Energy* shall be sent to:

SEED Program
Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737
Tel: (503) 378-4040 or toll-free in Oregon (800) 221-8035
Fax : (503) 373-7806
Email: ann.hushagen@state.or.us

FIGURE 1. SEED Program Process

VI. WAIVER

Under certain circumstances, part of the SEED OAR that describe specific activities, and which have been included in these Guidelines, may be waived.

VII. EXPANDED SERVICES

Expanded services are services provided by the Oregon Department of Energy that are outside the scope of OAR 330-130-0010 through 0080. At the discretion of the Agency and the Department of Energy, expanded services may be included in the interagency agreement with the Oregon Department of Energy.