

Chapter 23.76. ENERGY

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23.76.010. Energy.

Deschutes County is presently an importer of energy. After 1983 the Bonneville Power Administration will no longer assure 100 per cent distribution of electrical power. As with the rest of the nation, Deschutes County can anticipate increasingly expensive and possibly even shortages of gasoline. Therefore, it is likely that the County will face serious problems in the near future unless precautions are taken in time.

Hydropower generation in the County is limited to two sites, which are operating at capacity. There is another potential site at Wickiup Dam.

There is a possibility for fossil fuel development in the eastern portion of the County, but it is presently unfeasible. Local natural gas supplies could increase in the mid-1980's with the construction of a second natural gas pipeline through Central Oregon. There also exists a possibility for a third gas line in the future.

There is presently some geothermal investigation occurring in the County near Newberry Crater and also near the Three Sisters Mountains. Environmental impact statements to permit appropriate exploration in the Cascades have already been prepared. Problems with objectionable smells from released gases, possible groundwater contamination, earth subsidence or quakes are all hazards to be considered in geothermal energy use. Loss of recreational lands and esthetic qualities are also possibilities.

It appears Deschutes County would have few, if any, appropriate sites for coal or natural gas thermal generation plants, according to the State-wide Siting Task Force Report.

The County does have some possibility for other types of energy production. Wind generation may be feasible if it can be tied to the existing power grid. Waste wood burning is popular and feasible and one local manufacturer has constructed a 9000 KW facility, while another will save 6.9 million cubic feet of natural gas each year using waste wood. County Pollution Control Bonds can be used to finance conversion from fossil fuels to wood waste because it reduces a major solid waste problem, as well as reducing energy costs to local industries and the outflow of local money for imported energy.

Energy conservation is another important resource that can reduce pollution, free existing energy resources for other uses and reduce the outflow of money for energy. Education is possibly the most obvious way to promote conservation. Coordination through the Extension Service and by establishing a paid coordinator could do much to encourage conservation. Another way to obtain conservation is by regulation, such as by establishing higher building and subdivision standards. Sometimes education and regulation can be combined to require thermal ratings for new buildings so people can determine more efficient lay-outs, or by requiring the heat loss analyses performed by utility companies to be kept on file for public review.

Recycling is also an energy saver. For example, aluminum when reclaimed takes only four percent of the energy required to process raw ore, including handling and transportation costs. Recycled copper requires only 11 percent of the energy needed to obtain the metal from raw ores. Some recycling already exists locally but much more is possible.

Solar energy is a real possibility for Deschutes County. Proper siting of housing with a solar orientation can permit critical sunlight access. Passive solar methods, such as proper window placement and seasonal shading, can have significant impact.

Certainly one of the biggest energy issues to face Deschutes County is transportation. State-wide transportation consumes 36 percent of total State-wide energy use, and it constitutes 56 percent of an average household's energy use. As a rural area, Deschutes County is heavily dependent on automobiles and thereby consumes considerable gasoline. Efforts to reduce motorized vehicles would be difficult but the

effect would be lower energy use, pollution levels and expenses. Just the reduction of road construction and maintenance (re-sealing, snowplowing, etc.) would save considerable energy.

In light of local conditions and trends the following goals were chosen.
(Ord. 2002-005 §1, 2002; Ord. 2000-017 §1, 2000; Ord. 93-003, 1993; Ord. 92-051, 1992; Ord. 85-001, 1985; PL-20, 1979)

23.76.020. Goals.

1. To protect local natural energy sources.
2. To manage land uses to maximize the conservation of all forms of energy.
3. To assist, as appropriate, in the provision for adequate local energy supplies.

(Ord. 2002-005 §1, 2002; Ord. 2000-017 §1, 2000; Ord. 93-003, 1993; Ord. 92-051, 1992; Ord. 85-001, 1985; PL-20, 1979)

23.76.030. Policies.

1. General.
 - a. The County shall review and promote the development and use of local alternative energy sources in order to prepare for future shortages and to reduce the outflow of local dollars to buy energy.
 - b. Coordinated planning between local energy providers, particularly electrical, and the County Planning Department shall be sought. This planning is to be directed at determining energy needs in all parts of the County and assisting in the provision of adequate supplies and capital facilities.
 - c. Construction of large thermal or nuclear plants locally should be discouraged unless approved by a public vote.
 - d. Energy Assessment. During major plan updates, or more often as necessary, the County shall assess its energy use and the potential for energy conservation. The County shall use information available from the state and federal governments and utility companies.
2. Alternative energy sources - Geothermal resources policies.
 - a. Public involvement.
 1. The Planning Division shall ensure that citizens, land owners, and lease holders are given ample opportunity to be involved in all phases of geothermal planning and decision-making that occur under the County's jurisdiction. This involvement program shall provide for continuity of citizen participation, and for information that enables citizens to identify and comprehend geothermal issues.
 2. Federal and state agencies exercising geothermal responsibilities in the County shall be expected and encouraged to make use of the County's existing citizen involvement program whenever appropriate.
 - b. Intergovernmental coordination
 1. The County shall encourage the formulation of federal and state land and resource management policies which are consistent with the County's geothermal policies. In this regard the County shall endeavor to become a partner with the federal and state governments in determining the future of geothermal energy in the County.
 2. In view of the multiplicity of governmental jurisdiction over geothermal resources, the County shall seek close coordination with all affected local, state, and federal agencies. In this regard the Planning Division shall maintain regular communications with federal and state agencies that are exercising geothermal responsibilities in the County, and shall keep local officials informed of federal and state actions accordingly.

- c. Resource assessment.
 - 1. In order to identify and protect the undefined values of its geothermal resources, the County shall support continued resource assessment activities by the public and private sectors. In this regard, the Planning Division shall monitor such activities and collect additional resource data wherever possible for inclusion in the Geothermal Element during updates or amendments.
 - 2. In recognition of the public benefit derived from greater resource knowledge, the County may undertake its own resource assessment activities where such work is expected to ultimately benefit the local economy. The results of County-sponsored resource assessment will be given the widest possible dissemination in order to facilitate further geothermal development consistent with County policies.
- d. Resource Utilization.
 - 1. The County supports utilization of geothermal resources, either with heat pumps, direct applications, or for purposes of generating power. However, such support is conditioned on the determination that the proposed use can be developed in a timely, orderly, and environmentally-sound manner, and that adequate protection of the resource is provided so as to ensure its continued availability and productivity over time. Further, such support is limited to those resource areas where conflicting uses are not considered predominant, as identified in Policy 5(F).
 - 2. When County facilities are to be renovated or newly constructed, consideration shall be given to the use of geothermal resources in these facilities when such use is technically and economically advantageous. The County shall encourage other local entities to conduct similar geothermal evaluations during their facility planning processes.
- e. Economic development.
 - 1. The County's support for geothermal development shall be closely coordinated with its economic development program. The County believes that its low and moderate-temperature resources may offer a significant comparative advantage to business and industry, and it shall support geothermal projects that serve to retain or create employment opportunities in the County.
- f. Land-Use
 - 1. For purposes of compliance with Statewide Planning Goal 5, the County believes its geothermal resources and the conflicting uses identified in Section 4 of the Element should be balanced according to site-specific relative merits. Implementation measures shall provide protection for conflicting uses by conditionally allowing geothermal exploration and production, thereby balancing the benefits to the County from both geothermal resources and conflicting uses. This policy shall apply to all resource areas inventoried in Section 2 of the Element, except in those areas where the conflicting uses listed in Table 4.1 of the Element shall be fully protected as follows:
 - a. Exploration and Production Prohibited.
 - i. That portion of the Newberry Volcano resource area lying within the exclusion area boundary shown in Exhibit "B."
 - ii. Those areas presently defined by the Deschutes National Forest Land & Resource Management Plan, incorporated hereby reference, as ineligible for leasing, specifically: Wilderness, Research Natural Areas, Experimental Forest, Bend Municipal Watershed, Developed Recreation Areas, and Dispersed Recreation Unroaded Winter Areas.
 - b. Production Prohibited (Exploration Allowed).
 - i. Those areas presently defined by the Deschutes National Forest Land & Resource Management Plan, incorporated hereby by reference, as being limited to no surface occupancy, specifically: Experimental Forest, Dispersed Recreation Unroaded Areas, Dispersed Roaded Areas, Developed Recreation Areas, Protection Management Areas,

Special Management Areas, Potential Research Natural Areas, and Threatened and Endangered Species Areas.

The County has determined that conflicting uses shall be fully protected in the foregoing areas because of the greater economic, social, and environmental benefits that accrue from the conflicting uses. In researching this determination, the County has relied upon the discussion of conflicting uses and their consequences contained in Sections 4 and 5 of the Geothermal Element; the Rural Development, Economy, and Recreation sections of the Growth Management Element of the Comprehensive Plan; the Forest Lands, Open Spaces, Fish & Wildlife, and Historic & Cultural sections of the Resource Management Element of the Comprehensive Plan; the Recreation, Fish & Wildlife, Special Uses, Visual Quality, Economy, Employment, and Forest Dependent Community Concept sections of the Deschutes National Forest Land & Resource Management Plan; and the Oregon Department of Economic Development 1983 Annual Economic Report for Deschutes County. It is the County's determination that the conflicting use information contained in these references constitutes sufficient evidence of the greater importance of the conflicting uses to the County, thereby warranting exclusion of geothermal exploration and/ or production in the areas cited above.

- ii.. The County recognizes that if utilization of geothermal energy is to be optimized, the designation of land-uses for areas overlying geothermal resources must accommodate those uses to which the resources can be applied. In this regard, the County shall incorporate geothermal utilization as a determinant in land-use planning; and, where appropriate, shall review permitted uses that can utilize geothermal resources if and when suitable resources are confirmed in an area. However, geothermal end-uses shall be permitted only where their compatibility with surrounding land-uses can be demonstrated with certainty.
 - g. Environmental protection.
 1. In all cases the County's support for geothermal development shall be conditioned upon satisfactory evidence that sufficient environmental safeguards are provided. Environmental concerns of the County shall include, but not be limited to: air quality, water quality, noise, subsidence, induced seismicity, water consumption, fish and wildlife, vegetation, historic and cultural resources, visual and scenic qualities, erosion and earth stability, waste disposal, and public safety and health.
 - h. Public facilities and services.
 1. In addition to Policy G(1), in all cases the County's support for geothermal development shall depend on the extent of impacts to public facilities and services. In this regard, the County's concerns shall include, but not be limited to: roads, drainage, schools, law enforcement, fire protection, water supply, sewage disposal, solid waste disposal, and general administrative services.
 2. The Planning Division, in consultation with the Public Works Department, shall monitor geothermal activities in order to forecast impacts to public facilities and services; and shall prepare capital improvement or related plans accordingly so as to support geothermal development in a timely and orderly manner with a level of facilities and services appropriate to such development.
 - i. Fiscal responsibilities.
 1. In recognition of specialized administrative demands that may be placed on the County by geothermal developers, the County shall require said developers to defray County expenses associated with processing a geothermal permit request, or conduction related studies or monitoring programs, directly required by a geothermal project. This Policy shall also extend to any government agency engaged in geothermal development.
3. Alternative energy sources.

- a. Wind. Because the wind is a non-polluting, renewable energy source, major wind devices and associated facilities shall be conditional uses in agricultural, forest and other rural zones. Also, small scale (less than 20 KW) private use of wind generators or pumps shall be encouraged.
- b. Wood and slash wood. Given the availability and usefulness of waste and slash wood the County shall maintain a waste wood dump for processors where the material shall be made available to the public, and shall encourage U.S. Forest Service projects which make slash wood available.
- c. Solar. Because it is renewable and in plentiful supply locally the County shall encourage the use of solar energy by:
 - 1. Promoting the construction of housing with its long axis in the east-west direction and having solar access three hours before and after solar noon (variances because of topography, rock outcroppings or alternative solar access means may be permitted);
 - 2. Providing avenues for establishing solar property rights (see ORS 215.110) by such methods as solar sky space protective covenants in new developments and creating standard methodology for adjacent properties to establish solar sky space easements; and,
 - 3. Allowing for future centralized solar generation of electricity in the large vacant areas in the eastern portions of the County (particularly on BLM lands).
- d. Internal Operations. The County shall, when practicable, make energy efficiency and the use of renewable resources a regular practice in its design and operation of buildings, equipment and public facilities and services.
- e. Recycling.
 - 1. Recycling is an effective method of energy conservation. The County has adopted a County-wide recycling program in compliance with Senate Bill 405. The primary responsibility for this program is through the County Solid Waste Division. The ongoing recycling program will provide for the following:
 - a. Identify projects and methods to achieve the specific goals; and
 - b. Require and annual review of program status.
 - 2. The County shall consider the designation of a County employee as Recycling Coordinator who is responsible for:
 - a. Encouraging recycling throughout the County;
 - b. Fostering communications about recycling among local governmental agencies, organizations and the public; and,
 - c. Providing assistance to the County Solid Waste Advisory Committee in considering and implementing ways to increase local recycling activities.
 - 3. The County shall also consider recycling when enacting ordinances, issuing contracts and franchises and when purchasing supplies.
 - 4. The County shall study the possibility of initiating pilot projects regarding source separation of recyclables and their collection in existing or new garbage franchises.
 - 5. The County shall seek funds to provide staff assistance and resources for developing recycling drop-off and storage centers in the Bend, Redmond, Sisters and La Pine areas.
- f. Conservation.
 - 1. All homes constructed in Deschutes County shall meet State insulation standards. The County shall consider more stringent standards (both prescriptive and equivalent performance criteria) and encourage innovative building design which meets the intent of the prescriptive standards.
 - 2. To assist the public in understanding energy conservation in their homes the County will rate the "thermal effectiveness" of new or existing dwellings, if an owner requests, based on such factors as window placement, shading, insulation values and thermal mass, and other factors similar to the City of Davis, California, Community Development Department Standards.

3. Because multi-family housing and other types of common wall construction is more energy efficient the County shall encourage such development in urban areas.
4. Since "leapfrog" and scattered development is wasteful of energy in the provision of services (school buses, fire protection, utilities and transportation) these patterns shall not be permitted (see Rural Development and Urbanization chapters), and future development should occur in higher densities along existing corridors in urban areas.
5. Public/Private Actions: The County shall encourage local residents and businesses to conserve energy, to use renewable resources and to recycle materials. The County shall coordinate its efforts with those of local organizations, special districts, utility companies and state and federal agencies.

At the time of subdivision review, the County shall see that: Covenants which prevent energy conservation, such as roofline requirements precluding solar panels, bans on clotheslines and prohibitions on street motorcycles, shall not be established in proposed developments.

6. The County shall account for its 1% bicycle funds from the State Highway Funds, and shall provide this accounting to the Bicycle Advisory Committee on an annual basis. The 1% funds shall be the minimum spent to provide bicycle and pedestrian facilities within the County. The County shall establish methods for funding pedestrian and bicycle facilities that are not within the public right-of-way and therefore are not eligible for the 1% funds. The County shall consider setting aside monies which might otherwise be used for expanding motorized traffic ways and apply them toward a non-motorized transportation system which accesses educational, recreation, employment and shopping areas as well as connects to new development.
7. Oregon imports 45% of its energy as fuel for motorized vehicles. Nonmotorized transportation is recognized as an important way to conserve energy. The County shall provide bicycle and pedestrian connections between schools, residential areas, parks and other recreation attractions, shopping centers, and other commercial and industrial centers. In addition, the County shall encourage nonmotorized modes through the use of techniques such as designating nonmotorized areas (pedestrian malls), installing traffic cells and traffic calming designs, allocating a greater share of street space to nonmotorized modes, restricting motor vehicle parking, and other pedestrian and bicycle-oriented land use patterns.
8. As much as possible non-motorized systems should be favored over motorized transportation systems.
9. New major consumers of energy, such as commerce and industry, shall be located whenever possible near established energy distribution centers.
10. The County should set an example by weatherizing its buildings and considering passive or active solar heat, perhaps with assistance from retrofit grants.
11. To promote public awareness of the reasons and need for energy conservation the County shall develop an educational program for use County-wide.

(Ord. 2002-005 §1, 2002; Ord. 2000-017 §1, 2000; Ord. 93-003, 1993; Ord. 92-051, 1992; Ord. 85-001, 1985; Ord. 80-203, 1979; PL-20, 1979)