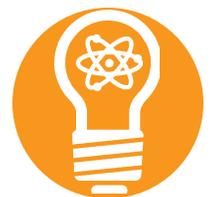




# Energy Conservation

*“Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.”*





**ADOPTED AMENDMENTS**

<b>DATE</b>	<b>CPA#</b>	<b>CHANGES</b>
12-11-07	CPA2007-00001	Entire chapter updated by Ordinance 07-22

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SECTION COVER PHOTO: CITY STAFF  
Power Lines.



Our way of life is powered by energy. From the construction process to home heating to getting around the community, affordable and reliable energy sources are counted upon to sustain our needs. Energy also drives the economy and has a significant impact on the environment. These roles are important to consider when planning for future sources, distribution, conservation efforts, land use, transportation, and development patterns. The City's commitment to manage land use to conserve energy is based on Oregon Statewide Planning Goal 13.

**GOAL 13: Energy Conservation**

*“Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based on sound economic principles.”*

Tigard residents envision a future where access to reliable energy supplies and their use do not degrade the environmental quality of the community. They recognize the importance of renewable energy resources for the economy, the value in conservation efforts, and the significance of land use and transportation planning on energy consumption. Public transportation and a well-connected bicycle and pedestrian network are services greatly supported by the community. The community also recognizes that the City can employ new techniques and technologies in municipal operations, as well as encouraging citizens to take a personal interest in energy consumption and conservation.

The City of Tigard currently has no energy resources and no future plans to develop any generation or supply facilities. The Oregon Department of Energy (DOE) has taken the statewide lead by planning to ensure an adequate, affordable, and clean energy supply is available for Oregonians. The DOE produces the *Oregon Energy Plan* on a biennial basis. It assesses energy demand and supply in the state, identifies issues affecting energy, and presents an action plan to meet the goals of the plan.

Energy conditions and future issues identified by the 2005-2007 *Oregon Energy Plan* include:

- Unstable energy pricing and supply will continue to affect communities as it did in 2002 when Oregonians spent 50% more per unit of energy to heat their homes than in 1998.
- World oil production may peak in the next decade and begin a long-term decline. Coupled with a growth in worldwide demand, peak oil will maintain or increase already high oil prices.



- Natural gas supplies from North America are declining, while prices have doubled in the past five years. Worldwide competition for the gas is also expected to increase.

*“Tigard has the ability to affect energy conservation efforts through developing efficient land use and transportation plans that reduce automobile trips.”*

To address these issues, the *Oregon Energy Plan* recommends conservation efforts for households, businesses, industry, and transportation, as well as developing clean and renewable energy resources. These efforts can provide insulation from, and reduce the community’s vulnerability to, volatile pricing and supplies. They are also consistent with statewide planning Goal 13 for maximizing the conservation of all forms of energy. Building efficiency standards, the Leadership in Energy and Environmental Design (LEED) rating system, and weatherization programs are options for promoting energy conservation in buildings. Metro’s *Regional Transportation Plan* (RTP) is required to address energy conservation, efficiency, and alternative transportation options under state and federal law. Options include driving less, buying fuel-efficient vehicles, or using alternative fuels.

Tigard has the ability to affect energy conservation efforts through developing efficient land use and transportation plans that reduce automobile trips. This includes promoting compact mixed use communities, and transit use and development. The City can lead by example in utilizing alternative energies and becoming more energy efficient

in municipal operations. Tigard can also challenge residents to reach energy conservation goals set by the community.

### KEY FINDINGS:

- Transportation is the largest use of energy in the state at 38%. A considerable reduction in energy use can be made with individuals altering their habits related to the use of motor vehicles.



- The City has no energy generation or supply facilities and therefore the community’s energy supply and pricing is controlled by forces beyond its direct influence.

- A number of alternative fuel options exist for motor vehicles, but supplies and availability are limited.



PHOTO: CITY STAFF

Hybrid City Vehicle.

- Large energy uses which the City has control over include street lighting, water transfer pumps, heating and cooling of municipal buildings, and the motor vehicle pool.

- Solar-generated power and wood heating are the two most common options available to the community for producing their own energy. Wood heating can be problematic to air quality due to the release of fine particulate matter.
- Weatherization, energy efficient building materials and appliances, and alternative energy sources can all reduce energy consumption in buildings.
- The citizens of Tigard value pedestrian and bicycle paths in the community and support the development of a well connected network.
- The citizens of Tigard value access to bus service in the community.
- The following land use planning strategies can result in a more energy-efficient community:
  - A. establishing mixed-use zones to encourage working, living, and shopping in the same neighborhood;
  - B. providing opportunities for increased density along public transit lines;



- C. support a public transit system that is reliable, connected, and efficient;
- D. building a bicycle and pedestrian network that is connected, safe, and accessible;
- E. connecting streets for efficiency and reducing congestion; and
- F. re-use of vacant and underutilized land.

**GOAL:**

13.1 Reduce energy consumption.

**POLICIES:**

1. The City shall promote the reduction of energy consumption associated with vehicle miles traveled through:
  - A. land use patterns that reduce dependency on the automobile;
  - B. public transit that is reliable, connected, and efficient; and
  - C. bicycle and pedestrian infrastructure that is safe and well connected.
2. The City shall implement regional and state regulations, plans, and programs that promote energy conservation.
3. The City shall require future development to consider topography, vegetation, and solar access during the design phase to reduce demands for artificial heating, cooling, and lighting.
4. The City shall implement and enforce state energy efficiency standards during the building permit review process.

*“The City shall implement and enforce state energy efficiency standards during the building permit review process.”*



- 5. The City shall take a leadership role in local energy matters by:
  - A. designing and developing public facilities, wherever possible, that take advantage of alternative energy sources and conserve energy in operations;
  - B. conducting energy audits on existing City facilities and implementing cost-effective recommendations as soon as possible;
  - C. investigating and participating in, when feasible, green energy programs, which use renewable energy resources; and
  - D. continuing to investigate new technologies that can reduce municipal energy consumption.



Solar Energy.

PHOTO: CITY STAFF

- 6. The City shall support energy conservation by:
  - A. encouraging designs that incorporate Leadership in Energy and Environmental Design (LEED) or other accepted standards or achieve a minimum certification;
  - B. informing the public about personal actions that can be taken to improve energy efficiency and reduce energy consumption;
  - C. directing the private sector to the variety of available incentives programs; and
  - D. providing flexibility in the land use process to take advantage of solar radiation.



### RECOMMENDED ACTION MEASURES:

- i. Create a process that requires new development to consider topography, vegetation, and solar access during the design phase.
- ii. Develop target decreases for energy consumption associated with municipal operations.
- iii. Purchase a percentage of Green Energy for municipal operations and then challenge the community to do the same.
- iv. Research and implement incentives and development codes that would encourage energy efficiency in new developments.
- v. Survey the community about energy consumption and identify top concerns that could be addressed through conservation incentives.