

Chapter 107. Travis County Conservation Plan¹

Contents:

107.001	[Findings] 1
107.002	Energy Conversation SubCommittee 2
107.003	Lighting 3
107.004	Work Station Modifications 3
107.005	Maintenance Considerations 4
107.006	Control Modifications 4
107.007	Electric Power -- General 5
107.008	Other Means of Saving Energy 5
107.009	Recycling Subcommittee 5

107.001 [Findings]

- (a) The Travis County Commissioners Court finds that ---
- (1) Travis County faces funding shortage arising from increasing demands for County services; and,
 - (2) unless effective measures are promptly taken by the Travis County Commissioners Court to implement conservation measures to stretch the effectiveness of current resources, the County will be hindered in its ability to provide for future needs;
 - (3) all departments within Travis County must begin immediately to significantly reduce County spending by implementing and maintaining effective conservation measures for the efficient use of County resources; and,
 - (4) the above objections are consistent with and support the policies set out last April, 1990 when the Commissioners Court adopted the Valdez Principles. The Principles most applicable are:
 - (A) No.3 Reduction and disposal of waste (recycling)
 - (B) No.4 Wise use of energy.
- (b) In order to achieve meaningful savings through conservation, it will be incumbent to elicit the cooperation and support of the entire County workforce.
- (c) Toward this end, the Department of General Services has established an ad hoc Conservation Committee comprised of all interested parties from all departments. The purpose of this committee is to identify areas for potential conservation and to pursue implementation of plans to effect conservation and cost savings, and to develop the participation of all County employees in this conservation effort.
- (d) The committee has established the following subcommittees to generate conservation plans in specific areas:

¹ Chapter 107 was adopted by Travis County Commissioners Court on March 28, 1995 (Item 3).

- (1) Energy Conservation Subcommittee
- (2) Recycling Subcommittee
- (3) Use of Recycled Materials Subcommittee
- (4) Cooperative Partnerships Subcommittee
- (5) Source Reduction Subcommittee

107.002 Energy Conservation Subcommittee

- (a) Energy Conservation Awareness Campaign. In order to raise awareness and involvement in conservation the County shall develop and implement a countywide promotional campaign which includes:
 - (1) announcements to all county departments;
 - (2) a countywide information network to inform the departments of conservation opportunities in their areas; and,
- (b) County Energy Conservation. All county departments shall:
 - (1) in cooperation with the Department of General Services establish a program for energy conservation within the confines of each department;
 - (2) evaluate the methods of energy conservation and modify the energy conservation program as necessary to ensure that all energy conservation efforts are effectively and practicably enacted; and,
 - (3) establish educational and incentive programs to encourage maximum employee participation.
- (c) The County has pursued an aggressive energy conservation plan through the years, with the installation of energy-saving heating and cooling equipment, reflective film and mini-blinds for windows, low wattage lighting and energy-saving ballasts, and a centralized, computerized energy management system to control the air conditioning and heating. Starting September 14, 1990 General Services initiated shorter operating hours and duty cycling for all air handlers in an effort to achieve additional energy savings.
- (d) Additional Energy Conservation Measures would include, but not be limited to the following:
 - (1) Aggressive use of duty cycling to conserve air conditioning
 - (2) Curtailment of weekend air conditioning unless 25 per cent or more of a building is occupied
 - (3) Ban on space heaters, except in extraordinary circumstances

107.003 Lighting

- (a) Because the lighting systems of many existing buildings were designed within the restrictions of initial cost economies, without knowledge about final space use and subdivision, and without benefit of relatively recent developments and research findings in the field, there exists significant potential for lighting system usage modification. These modifications can reduce substantially the energy consumed while still providing building occupants with the quality and quantity of illumination required to perform their various task and functions.
- (b) Establish an effective lighting usage program: a planned program to turn lights on when and where they are needed. The major advantages of this program is that it can be tailored to the individual characteristics of the space and needs of its occupants, implemented relatively inexpensively, and implemented very quickly. The key element of a lighting usage program is a lighting schedule related to occupant usage patterns. Personnel should be assigned, trained and made responsible for the efficient utilization of lighting by means of established schedules for the control of lighting.
- (c) Define the exact nature of occupancy for each period of time. Determine the amount of lighting needed for safety and security purposes. Train the responsible employees to assure understanding and compliance with the procedures.
- (d) For example, significant amounts of energy (and cost) can be conserved in buildings by means of lighting schedules requiring reduced for daytime unoccupied (Saturdays, Sundays, and holidays), nighttime unoccupied and maintenance periods (low lighting levels).
- (e) Campaign for better utilization by using letters, memos, signage and personal contact to encourage occupants to use lighting only when it is needed, to use only the amount of lighting required, and to turn off lights whenever they are not being used.
- (f) Post small "STOP: Save Energy" signs near each light switch to remind users to turn off lighting when it's not in use.

107.004 Work Station Modifications

- (a) Work stations can be relocated to take maximum advantage of the existing lighting system. Typical modifications to work stations locations are as follows:
 - (1) Move desks and other work surfaces to a position and orientation that will use installed luminaries to their greatest advantage (instead of adding luminaries).
 - (2) To the extent permitted by productivity requirements and related concerns, group tasks which require approximately the same levels of illumination. This may reduce the number of areas requiring higher

illumination levels and provide an opportunity to reduce the total amount of lighting needed.

- (3) Locate work stations requiring the highest illumination levels nearest the windows. (Note: Recognize that utilization of natural lighting will have an impact on heat gain, therefore requiring that the heat gain/light gain trade-off be given careful consideration).
- (4) Arrange work surfaces so that sidewall daylighting crosses the task perpendicular to the line of vision.

107.005 Maintenance Considerations

- (a) Proper maintenance of lighting system components serves to keep the system running at peak efficiency. This not only conserves energy and energy costs, but also helps maintain quality illumination and extends lamp and lamina life. The following maintenance considerations should be reviewed:
 - (1) Lamp efficiency deteriorates over the life of a lamp. Light output should be checked regularly with a calibrated light meter by maintenance personnel. When the light output of a group of lamps has fallen approximately 70% of the original light output, relamp all fixtures in the group at the same time.
 - (2) Lamps should be wiped clean at regular intervals to assume maximum efficiency. Lamps which are exposed to an atmosphere with substantial amounts of dirt, grease or other contaminants should be cleaned more frequently than lamps in a relatively clean atmosphere.
 - (3) Lamina efficiency can be maintained by properly cleaning reflecting surfaces and shielding media. Replace lens shielding that has yellowed or become hazy with a clear acrylic lens with good non-yellowing properties.
 - (4) Clean ceilings, walls and floors frequently to improve reflective qualities. When daylight is used, wash windows frequently to maintain illumination levels on tasks which require some natural illumination.

107.006 Control Modifications

- (a) In many cases modification of existing lighting controls, and addition of new ones, can have a considerable effect on energy consumption. Consider the following guidelines:
 - (1) When natural light is available in a building, consider the use of photocell switching to turn off lighting in areas where the natural light is sufficient for the task.
 - (2) Use photocell and/or time clock controls for outdoor lighting whenever feasible. Parking areas, building exteriors, identification signs, etc.,

usually require lighting for only a part of the period of darkness. Such lighting should be turned off automatically during late evening and early morning hours except for security and safety lighting.

- (3) Use time controls for those areas of a building which are used infrequently and only for brief periods. These controls turn off lights automatically after being activated for a set period of time.
- (4) Use alternate switching or dimmer controls when spaces are used for multiple purposes and require different amounts of illumination for the various activities.

107.007 Electric Power -- General

- (a) Through letters, memoranda, signage, personal contacts and other means, encourage all building personnel to turn off all electric equipment not in use, including portable fans, typewriters, calculators, coffee pots, etc. Encourage all employees to turn off all office equipment (as recommended by General Services and Information Management Systems) at night, and when not in use for long periods.
- (b) Elevators. Encourage building occupants to use the stairways when only a few stories are involved and when security permits.

107.008 Other Means of Saving Energy

- (a) Close curtains/blinds at night
- (b) Encourage comfortable clothing in summer (ties a no-no)
- (c) Pursue large ticket conservation measures through the Governor's Energy Office and the City of Austin's Resource Management Offices

107.009 Recycling Subcommittee

- (a) Recycling Awareness Campaign. In order to raise awareness and involvement in recycling and to increase markets for recycled products, the County shall develop and implement a countywide promotional campaign which includes:
 - (1) announcements to all county departments;
 - (2) a countywide information network to inform the departments of recycling opportunities in their areas; and,
 - (3) efforts to encourage county departments to purchase recycled products.
- (b) County Recycling. All county departments shall:
 - (1) in cooperation with the County Departments of Purchasing and General Services establish a program for the separation and collection of all recyclable materials generated by the entity's operations,

including, at a minimum, aluminum, highgrade office paper, and corrugated cardboard;

- (2) provide procedures for collecting and storing recyclable materials, containers for recyclable materials;
- (3) evaluate the amount of recyclable materials recycled and modify the recycling program as necessary to ensure that all recyclable materials are effectively and practicably recycled; and,
- (4) establish educational and incentive programs to encourage maximum employee participation.

(c) County Preference for Recycle Products. County departments shall give preference in purchasing to products made of recycled materials if:

- (1) the products meet applicable specifications as to quantity and quality; and,
- (2) the cost of the product determined by life-cycle cost accounting does not exceed by more that 10 percent the cost of similar alternative products determined by life-cycle cost accounting not made of recycled materials.
- (3) the Purchasing Department shall review and revise its procurement procedures and specifications for the purchase of goods, supplies, equipment, and materials in order to:
 - (A) eliminate procedures and specifications that explicitly discriminate against products made of recycled materials;
 - (B) encourage the use of products made of recycled materials;
 - (C) ensure to the maximum extent economically feasible that County purchases that may be recycled when discarded; and,
 - (D) in developing new procedures and specifications, the County shall encourage the use of recycled products and products that may be recycled or reused.

(d) Other areas of possible recycling include:

- (1) lead-acid batteries
- (2) yard waste
- (3) used oil
- (4) RAP (reclaimed asphalt paving)