

## **UTILITIES ELEMENT**

NOTE: Unless otherwise noted, the goals, objectives and policies contained in this element shall guide development of the Main Campus and Southwest Campus in Tallahassee as well as the Panama City Campus in Panama City, Florida.

### **STEAM AND CHILLED WATER SUB-ELEMENT**

#### **Goal 1**

**To provide heating, ventilation, and air conditioning to meet the future needs of the University.**

#### **Objective 1A**

**Improve the efficiency and performance of the chilled water system within five years to improve energy efficiency and make energy savings.**

##### **Policy 1A-1**

Continue to monitor improved scheduling of building HVAC operations to reduce chilled water waste during periods when buildings are not in use.

##### **Policy 1A-2**

Continue to monitor control system technology and modify standard control requirements for buildings and HVAC system types including sequences of operations and typical control points.

##### **Policy 1A-3**

Continue to document the status of existing chillers, pumps, and piping systems. Include an evaluation of present condition, required repairs and maintenance, operating costs and anticipated remaining life, and evaluate scenarios for supporting proposed expansion.

#### **Objective 1B**

**Ensure adequate chilled water production and distribution capacity to meet the future growth of the University.**

##### **Policy 1B-1**

Update the chilled water system load analysis and the distribution system load

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map/analysis at least yearly. The analysis will include all existing facilities and all future development plans.

**Policy 1B-2**

**Establish a new utility corridor to serve the proposed classroom/office area north of Parking Garage #4 and the proposed expansion of academic facilities south of Call Street.**

**Policy 1B-3**

Establish new utility corridor from the new Satellite Chilled Water Plant II to serve the future classroom complex and student union expansion.

**Policy 1B-4**

Maintain a level of service at the central plant and both satellite plants for chilled water supply of 3.75 tons per 1,000 net square feet. This capacity will be available with one chiller on standby in each chilled water production facility.

**Policy 1B-5**

Update chilled water utility maps on a continuing basis to incorporate new construction. Copies of current maps are available from the Campus Utilities Section in the Facilities Department.

**Objective 1C**

**Continue to improve the efficiency and performance of the steam system to improve energy efficiency and make energy savings.**

**Policy 1C-1**

Continue to inspect all heat exchangers at least twice a year to ensure that hard water is not entering the steam condensate system.

**Policy 1C-2**

Continue to develop and implement improved scheduling of building HVAC operations to reduce steam waste during periods when buildings are not in use.

**Policy 1C-3**

Continue to optimize the steam system pressure to reduce thermal losses during periods of low demand.

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**Objective 1D**

**Ensure adequate steam production and distribution capacity to meet future needs of the University.**

**Policy 1D-1**

Expand steam distribution piping to provide for future growth into the areas of planned new construction. Coordinate timing with development planning of new areas.

**Policy 1D-2**

Update the steam distribution maps and flow analysis at least yearly to verify adequacy of steam distribution capacity.

**Policy 1D-3**

Maintain a level of service at the central plant of 55 pounds per hour of steam per 1,000 net square feet. This capacity will be available with one boiler on standby.

**Policy 1D-4**

Update steam utility maps on a continuing basis to incorporate new construction. Copies of  
of  
Current maps are available from the Campus Utilities Section in the Facilities Department.

**ELECTRICAL POWER AND OTHER FUELS SUB-ELEMENT**

**Goal 2**

**To provide adequate and safe electric facilities and service to support the mission of the University.**

**Objective 2A**

**To improve the efficiency and performance, reduce system losses of electric distribution system, and to ensure adequate electric distribution capacity and space to meet the future needs of the University.**

**Policy 2A-1**

Continue to provide projected electric load data to the local electrical providers in Tallahassee and Panama City at least every three years or when significant changes

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develop.

**Policy 2A-2**

The University shall provide and maintain electrical distribution circuits from the Woodward Avenue Substation in the center of the campus to handle the additional loads for the projected expansions in those areas.

**Policy 2A-3**

The University shall maintain an up-to-date electrical riser diagram of the campus.

**Policy 2A-4**

The University shall provide underground electrical distribution required to accommodate the proposed expansion projects.

**Policy 2A-5**

The University will continue to provide redundant electrical service to all new buildings by creating loop feeds.

**Policy 2A-6**

As new facilities are developed, coordinate conduit and cable routing with routes for mechanical system piping in order to create orderly utility corridors.

**Policy 2A-7**

The University shall continue to maintain a level of service in the main transformers and distribution system to provide 3 KW per 1,000 gross square feet.

**Policy 2A-8**

Update the utility policies and project development manual for architects, engineers, and FSU personnel.

**Policy 2A-9**

Update electrical utility maps on a continuing basis to incorporate new construction. Copies of current maps are available from the Central Utilities and Engineering Services Section in the Facilities Department.

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**Objective 2B**

**Improve maintenance and safety procedures relating to the electric distribution systems.**

**Policy 2B-1**

Update and expand the preventative maintenance program to inspect the 15 KV equipment (i.e., substation, switches, and transformers) on an annual basis.

**Policy 2B-2**

Continue to study the electrical distribution system every five years to determine if the circuits are evenly balanced.

**Policy 2B-3**

Annually review and update all existing safety and training programs.

**Objective 2C**

**Establish design standards and operations programs to improve conservation of energy.**

**Policy 2C-1**

Pursue state energy office grants to assist in the upgrading of equipment and studying of procedures to save energy.

**Policy 2C-2**

Expand, enhance, and promote existing administrative and operational procedures to conserve energy and minimize future demand, under the leadership of the Central Utilities and Engineering Services Section in the Facilities Department.

**TELECOMMUNICATIONS SYSTEMS SUB-ELEMENT**

**Goal 3**

**To support the mission of the University by providing Voice, Data, Video services via campus wide infrastructure that will be reliable, flexible, expandable and sustainable.**

**Objective 3A**

**Expand and enhance the campus infrastructure to match University growth, allowing seamless communications and networking to all areas of future University expansion, to maintain a continuous improvement of service and sustainability to the University**

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**community as a whole.**

**Policy 3A-1**

Maintain relationships between the Facilities Department and Information Technology Services (ITS) so that internal building wiring (voice, video and data), networking infrastructure and external infrastructure (the number and type of conduits and manholes required by the building) is considered when new buildings are added to the Campus. Include input from ITS in the programming and planning of appropriate major and minor new construction, renovation, and remodeling projects.

**Policy 3A-2**

Develop policies and procedures regarding continued expansion of underground conduit and distribution systems (“outside plant”). If the policy requires purchasing existing conduit systems or installation of new infrastructure, determine funding sources. The Plan will be amended to reflect the results of the Master Telecommunications Plan and other studies that may be done.

**Policy 3A-3**

Continue to develop new or extension contracts that that will allow new products and services in the areas of voice, video and networking services to the campus.

**Policy 3A-4**

Complete a review of the existing 20 Year Master Telecommunications Plan of the duct banks and manhole infrastructure and determine the impact of the new voice circuit requirements as well as the impact and expansion capabilities to remote properties.

**Policy 3A-5**

Complete a review and 10 Year Master Networking Plan for networking technologies. This could include building infrastructure, national network connectivity, equipment replacement cycles, strategic locations where wireless equipment would be placed to provide excellent coverage to our growing customer base.

**Objective 3B**

**Develop a 20 Year Master Plan for Telecommunications covering voice services, networking services, Outside Plant Infrastructure and system capability.**

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**Policy 3B-1**

Annually review voice, video and data technologies and infrastructure to identify those aspects that are in demand or may have changed. Following such review(s) identify funding priorities.

**Policy 3B-2**

Annually review both the 20 Year Master Plan for Telecommunications and 10 year Master Plan for networking to determine if new services, properties or technologies have changed and should be revised.

**Policy 3B-3**

Assure that the expanding Southwest Campus and FSU facilities located within Innovation Park are included in all master planning documents and long range planning activities for Telecommunications and Networking infrastructure. This would include establishing a centralized utilities corridor for placing underground infrastructure.

**Policy 3B-4**

Continue to identify resources and establish a reserve within FSU to allow maximum flexibility and sustainability concerning the implementation of these two master plans for Telecommunications.

**Objective 3C**

**Upgrade and/or replace the telecommunications infrastructure across the University.**

**Policy 3C-1**

Continue to have the Florida State University Telecommunications Infrastructure Standard or any subsequent revision as a mandatory minimum requirement for all new construction and renovation projects.

**Policy 3C-2**

Initiate the first comprehensive “Florida State University Telecommunications Networking Infrastructure Standard”, and include this or any subsequent revision as a mandatory minimum requirement for all new construction and renovation projects.

**Policy 3C-3**

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Continue to review, on a yearly basis, the existing infrastructure and how it can be improved by means of developing a scope of work and the priority order in which the improvements should be scheduled. This would be accomplished by following the Master Plan for Telecommunications as outlined in Policies 3B-1, 3B-2, and 3B-3.

**Policy 3C-4**

The University shall implement telecommunications system improvements as identified in the Master Plan for Telecommunications of the University. The timing and phasing requirements and priorities for these improvements are established in the Capital Improvements Element.

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