

*Strategic Energy & Water Plan*

***July 2013 – June 2014***

**Executive Summary**

Fayetteville State University’s **2013-14 Strategic Energy & Water Plan** is in direct support of several key documents.

* FSU’s Strategic Plan 2009-2014, Strategic Priority 6 – Fiscal resourcefulness and sustainability.
	+ Initiative 4 – Develop/implement environmental sustainability programs.
		- Principal Accountability Indicator 3 – Develop a conservation plan to include reduced energy/water consumption.
* American College and University President’s Climate Commitment Signatory (2010)
* FSU’s Sustainability Policy (2011)
* FSU’s Climate Action Plan (2012)

The purpose of the **Strategic Energy & Water Plan** is to guide the fiscally and environmentally responsible usage of valuable resources in accordance with state legislation, while striving to ensure a safe positive learning environment that provides an acceptable level of comfort for students, faculty, staff, and visitors.

Key elements of this **2013-14 FSU Strategic Energy & Water Plan** include:

* Make regular presentations to faculty, staff and students to drive energy and water conservation behavior change on campus
* Convene the FSU Sustainability Coalition quarterly and present detailed utility reports to the Coalition
* Implement a Building Manager Program at all FSU facilities
* Incorporate sustainability principles in at least 1 course per semester in the 2013-14 academic year
* Publish the 2013 FSU Campus Sustainability Report
* Design and construct LEED-certified or equivalent, high performance buildings on campus
* Include building commissioning on all new construction and major renovation projects on campus
* Complete the Investment Grade Audits and begin construction on TWO Energy Savings Performance Contracts (ESPC) at FSU
* Identify key opportunities to simultaneously optimize space utilization and energy management goals
* Identify incentive programs from utility providers to reduce utility expenses
* Include utility sub-meters on all new construction and major renovation projects
* Implement a real-time, web-based energy and sustainability dashboard application

**North Carolina Legislative Basis for the Plan**

***Session Law 2007-546 / Senate Bill 668*** – Energy consumption per gross square foot to be reduced by 20% by 2010 and 30% by 2015 based on the 2003-2004 fiscal year. Each State institution of higher learning to update its management plan annually and include strategies for supporting consumption reduction requirements. Each university shall submit an annual Strategic Energy Plan to the State Energy Office.

***Session Law 2008-203 / Senate Bill 1946*** – Energy Efficiency: 30% reduction for new construction projects, 20% reduction for renovation projects (both based on 2004 codes). Water efficiency: for construction/renovation projects 20% reduction in indoor potable water use, and sum of outdoor potable water use and harvested storm water use will be reduced by 50% (based on 2006 NC Building Code). These requirements are mandatory for universities 8/8/2008.

***NC Executive Order 156 –*** State Government Environmental Sustainability, Reduction of Solid Waste, and Procurement of Environmentally Preferable Products.

***General Statute 143 64.12*** – Utility Saving Initiative for State Agencies and State Institutions of Higher Learning.

***UNC-GA Sustainability Policy*** – Adopted into the UNC Policy Manual on October 9, 2009. References both NC Senate Bills above, as well as portions of UNC Tomorrow.

**Plan Goals and Objectives**

1. **Create organizational culture change for energy and water efficiency and conservation**
	1. Educate faculty, students and staff about their responsibility in FSU energy and water conservation
	2. Create and facilitate committees/groups and convene them regularly to champion culture change
	3. Host events both on and off campus to raise awareness and engage participants
2. **Reduce campus energy and water consumption**
	1. Design and construct only LEED-Certified, high-performing, energy and water efficient buildings
	2. Include building commissioning in all new construction and major renovation projects
	3. Implement energy and water conservation measures in campus facilities and operations
3. **Reduce utility expenses by working with utility providers on rates, incentives and other strategies**
	1. Ensure appropriate utility rate schedules and accurate billing
	2. Identify and participate in all available utility incentive programs
	3. Sub-meter campus facilities to inform strategies to reduce utility expenses

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| **Goal 1: Create Organizational Culture Change for Energy and Water Efficiency and Conservation** |
| **Objective 1.1** | Educate faculty, students and staff about their responsibility in FSU energy and water conservation |
| **Objective 1.2** | Create and facilitate committees/groups and convene them regularly to champion culture change  |
| **Objective 1.3** | Host events both on and off campus to raise awareness and engage participants |
| **2012-13 Activities** |  **Measurement** **Expected Actual** | **Investment** | **Assigned to** | **Funding Source** |
| Quarterly meetings of FSU Sustainability Coalition with detailed utility reporting | Hold 4 quarterly meetings with utility reports | Done; reports given quarterly at Sustainability Coalition meetings  | Staff time | Energy Manager | Title III |
| Sustainability and Energy presentations to FSU staff and students at new staff and new student orientations | 80 attendees | Done; 150 attendees | Staff time | Energy Manager and Sustainability Coordinator | Title III, State |
| Student Green Team events | Hosted 4 educational/awareness events targeting students | Done; multiple events held | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |
| Implement a Building Manager Program in all FSU campus facilities | ID building managers and define roles and responsibilities in all FSU campus facilities | Not complete; move this forward to 2013-14 | Staff time | Energy Manager | Title III |
| Publish 2012 FSU Sustainability Report | Publish 1 report  | Done | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |
| Integrate sustainability principles into FSU academic curriculum | Incorporate sustainability principles in at least 1 course per semester in the 2012-13 academic year | Done | Staff time | Energy Manager | Title III |
| Prepare for the 2012-13FSU GHG inventory for ACUPCC | Prepare for 2012-13 GHG Inventory | Data collection underway | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |
| **2013-14 Activities** |  **Measurement** **Expected**  | **Investment** | **Assigned to** | **Funding Source** |
| Quarterly meetings of FSU Sustainability Coalition with detailed utility reporting | Hold at least 4 quarterly meetings with utility reports | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |
| Student Green Team events | Host at least 4 educational/awareness events targeting students  | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |
| Implement a Building Manager Program in all FSU campus facilities | Identify building managers and define roles and responsibilities in all FSU campus facilities (carry forward from 2012-13) | Staff time | Energy Manager and Operations Director | Title III, State |
| Publish 2013 FSU Sustainability Report | Publish 1 report | Staff time  | Sustainability Coordinator and Energy Manager | Title III, State |
| Integrate sustainability principles into FSU academic curriculum | Convene a faculty-led committee from multiple departments to begin a formal process that also addresses AASHE STARS reporting  | Staff time | Sustainability Coordinator and Energy Manager | Title III, State |

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| **Goal 2: Reduce campus energy and water consumption** |
| **Objective 2.1** | New construction and major renovation standard is LEED-certified and/or high performance |
| **Objective 2.2** | Include building commissioning in all new construction and major renovation projects |
| **Objective 2.3** | Implement energy and water conservation measures in campus facilities and operations |
| **2012-13 Activities** |  **Measurement** **Expected Actual** | **Investment** | **Assigned to** | **Funding Source** |
| Continue design and construction of LEED certified, high performance buildings | Renaissance Hall, Science & Tech, R.J. Student Center  | All 3 buildings continue on path to LEED Silver certification | Staff time | Facilities Management, Planning & Construction | State, Title III |
| Include building commissioning on all new construction and major renovation projects | Continue Cx contracts on SciTech, Ren-Hall and RJSC | In progress  | $673,000 | Facilities Management, Planning & Construction | State |
| Main Campus ESPC (FSU) | Select ESCO partner, complete IGA, begin construction | ESCO selected, IGA in progress | Staff time | Energy Manager | Title III |
| Lighting ESPC in Residence Halls (UNC GA) | Assist UNC GA with ESCO selection, complete FSU IGA | ESCO selected, IGA in progress | Staff time | Energy Manager | Title III |
| Incorporate energy use into campus space planning and utilization efforts | Identify key opportunities to optimize space utilization and energy management goals | Done | Staff time | Energy Manager | Title III |
| Apply for HB1292 Carry-Over funds | Use ARRA-funded ECM’s for first year application | Done; $82,767 approved | Staff time | Energy Manager | Title III |
| **2013-14 Activities** |  **Measurement** **Expected**  | **Investment** | **Assigned to** | **Funding Source** |
| Continue design and construction of LEED certified, high performance buildings | Complete design and construction R.J. Student Center  | Staff time | Facilities Management, Planning & Construction | State |
| Include building commissioning on all new construction and major renovation projects | Complete or continue Cx contracts on Renaissance Hall, Science & Tech Building and Rudolph Jones Student Center | $673,000 | Facilities Management, Planning & Construction | State |
| Main Campus ESPC (FSU) | Complete IGA, begin construction | Staff time | Energy Manager | State |
| Lighting ESPC in Residence Halls (UNC GA) | Complete FSU IGA, begin construction | Staff time | Energy Manager | State |
| Incorporate energy use into campus space planning and utilization efforts | Identify key opportunities to simultaneously optimize space utilization and energy management goals  | Staff time | Energy Manager | State |
| Apply for HB1292 Carry-Over funds | Increase carryover application to at least $90,000 | Staff time | Energy Manager | State |
| **Goal 3: Reduce utility expenses by working with utility providers on rates, incentives and other strategies** |
| **Objective 3.1** | Ensure appropriate utility rate schedules and accurate billing |
| **Objective 3.2** | Identify and participate in all available utility incentive programs |
| **Objective 3.3** | Sub-meter campus facilities to inform strategies to reduce utility expenses |
| **2012-13 Activities** |  **Measurement** **Expected Actual** | **Investment** | **Assigned to** | **Funding Source** |
| Review all utility accounts to ensure appropriate rate schedule and accurate billing | Complete monthly account review for all electric, natural gas, propane, water/sewer accounts | Done, on-going | Staff time | Energy Manager | Title III |
| Work with utility providers to identify incentive programs to reduce FSU utility expense | Document responses and pursue opportunities with all providers | Done, on-going | Staff time | Energy Manager | Title III |
| Identify opportunities for 3rd party energy generation and conservation projects | Identify 2 project opportunities and present to VC Business & Finance | 2 leads identified, on-hold for UNC-GA/SEO coordination | Staff time | Energy Manager | Title III |
| Include sub-metering on all new construction and major renovation projects | Complete the installation of electric kW demand meters in 20 buildings | kW demand meters installed in 37 buildings across campus | $70,000 | Energy Manager | State, Title III |
| **2013-14 Activities** |  **Measurement** **Expected**  | **Investment** | **Assigned to** | **Funding Source** |
| Review all utility accounts to ensure appropriate rate schedule and accurate billing | Complete monthly account review for all electric, natural gas, propane, and water/sewer accounts | Staff time | Energy Manager | State |
| Work with utility providers to identify incentive programs to reduce FSU utility expense | Document responses and pursue identified opportunities with all providers | Staff time | Energy Manager | State |
| Identify opportunities for 3rd party energy generation and conservation projects | Review UNC-GA/SEO guidance for 3rd party-financed energy projects and propose plan forward for 2014-15 | Staff time | Energy Manager | State |
| Include sub-metering on all new construction and major renovation projects | Install natural gas metering on at least 4 large state-funded buildings | $40,000 | Energy Manager | State |
| Implement a web-based real-time energy and sustainability dashboard application  | $30,000 | Energy Manager | State |

**Declaration**

I have read the FSU 2013-14 Strategic Energy & Water Plan. The plan, as presented, supports reductions required in G.S.143-64.12a (30% reduction in annual energy/water consumption by 2015).

Signed this 14th day of October, 2013.

**Commitment**

* Energy and water management is the responsibility of the occupants at each facility, guided and supported by the FSU Energy Manager and FSU Facilities Management and Operations staff.
* The attached plan outlines the activities and expenditures required to reach energy and water consumption reduction goals.
* FSU Department Heads will review progress and results quarterly, and will support the FSU Energy Manager’s attendance at Departmental meetings as required.

**Strategic Energy & Water Plan Mandate - Goal**

Reduce annual Total Energy Consumption by a minimum of 30% by fiscal year 2015-2016 from a baseline fiscal year of 2002-2003.

**Strategic Energy & Water Plan Mandate - Measure**

Our Key Performance Indicator is *Total Energy Use in BTU per Square Foot per Year.*

**Strategic Energy & Water Plan Mandate - Commitment**

I have read and support the FSU 2013-14 Strategic Energy & Water Plan.

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 Mr. Jon Parsons Mr. Rudolph Cardenas Mr. Carlton Spellman Dr. Thomas Conway

 Energy Manager A.V.C. for Facilities Management V.C. for Business & Finance V.C. and Chief of Staff