

## **2011 Utility Savings Initiative Annual Report**

<b>Citation of Law or Resolution:</b>	GS: 143-64.12
<b>Section Number:</b>	Section J
<b>Due Date:</b>	Dec. 1, 2011
<b>Submission Date:</b>	Nov. , 2011

**Receiving Entities:**

The Joint Legislative Commission on Governmental Operations

**Submitting Entity:**

The North Carolina Energy Office in the Department of Commerce

# **2011 ANNUAL REPORT FOR THE UTILITY SAVINGS INITIATIVE PROGRAM**

## **INTRODUCTION**

### **§ 143-64.10. Findings; policy...**

(6) That State government shall undertake a program to reduce the use of energy, water, and other utilities in State facilities and facilities of the State institutions of higher learning and equipment in those facilities in order to provide its citizens with an example of energy use, water use, and utility use efficiency.

### **§ 143-64.12. Authority and duties of the Department; State agencies and State institutions of higher learning.**

(a) The Department of Commerce through the State Energy Office shall develop a comprehensive program to manage energy, water, and other utility use for State agencies and State institutions of higher learning and shall update this program annually. Each State agency and State institution of higher learning shall develop and implement a management plan that is consistent with the State's comprehensive program under this subsection to manage energy, water, and other utility use. The energy consumption per gross square foot for all State buildings in total shall be reduced by twenty percent (20%) by 2010 and thirty percent (30%) by 2015 based on energy consumption for the 2002-2003 fiscal year. Each State agency and State institution of higher learning shall update its management plan annually and include strategies for supporting the energy consumption reduction requirements under this subsection. Each community college shall submit to the State Energy Office an annual written report of utility consumption and costs.

### **§ 143-64.12. Authority and duties of the Department; State agencies and State institutions of higher learning.**

(j) The State Energy Office shall submit a report by December 1 of each year to the Joint Legislative Commission on Governmental Operations describing the comprehensive program to manage energy, water, and other utility use for State agencies and State institutions of higher learning required by subsection (a) of this section. The report shall also contain the following:

- (1) A comprehensive overview of how State agencies and State institutions of higher learning are managing energy, water, and other utility use and achieving efficiency gains.
- (2) Any new measures that could be taken by State agencies and State institutions of higher learning to achieve greater efficiency gains, including any changes in general law that might be needed.
- (3) A summary of the State agency and State institutions of higher learning management plans required by subsection (a) of this section and the energy audits required by subsection (b1) of this section.
- (4) A list of the State agencies and State institutions of higher learning that did and did not submit management plans required by subsection (a) of this section and a list of the State agencies and State institutions of higher learning that received an energy audit.
- (5) Any recommendations on how management plans can be better managed and implemented.

### **PROGRAM SUMMARY:**

The content of this report is totally dependent upon the information received from the program's participants. Participants are encouraged to review all prior year's information and make corrections as necessary.

Since the program's inception in fiscal year 2002-03, an investment of approximately \$11.5 million in state appropriated funds has produced more than \$417 million in avoided utility costs. Energy consumption is down 18% while energy costs have increased 44%. Water consumption has decreased 33% while costs have increased 92%. Had the Utility Savings Initiative not been in place taxpayers would have paid an additional \$82.8 million for utilities and state facilities would have been responsible for emitting an additional 250,799 metric tons of carbon dioxide into the atmosphere.

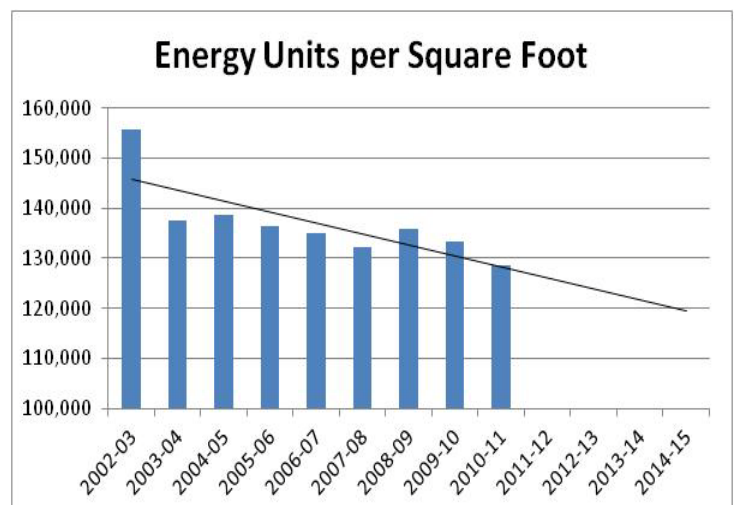
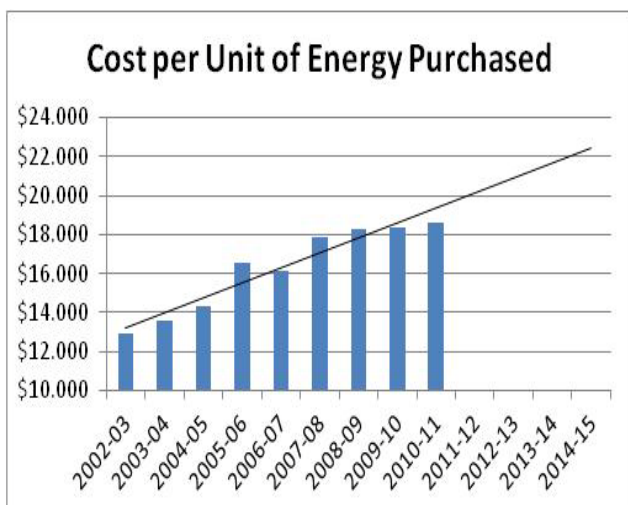
### **HISTORY OF THE PROGRAM:**

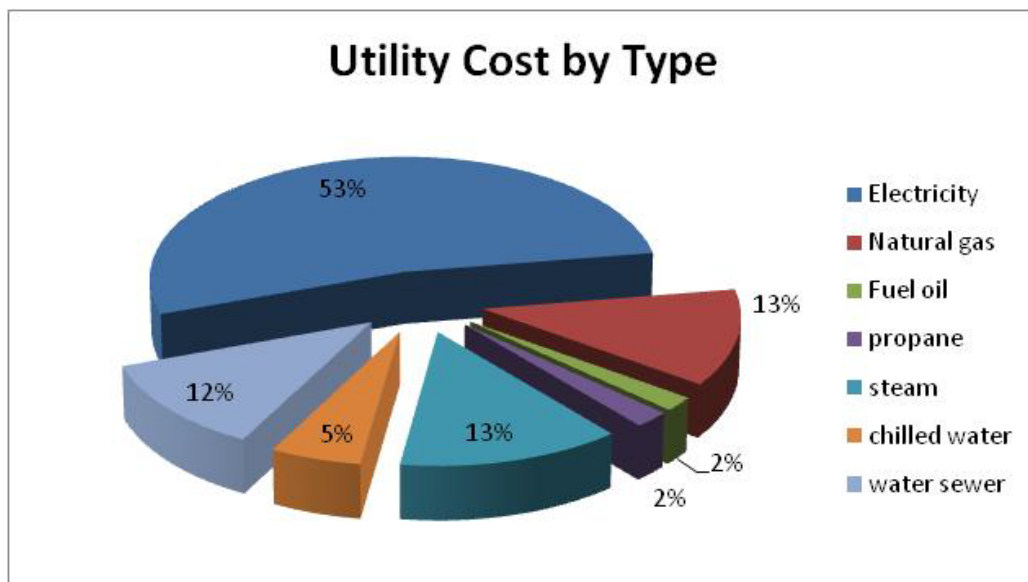
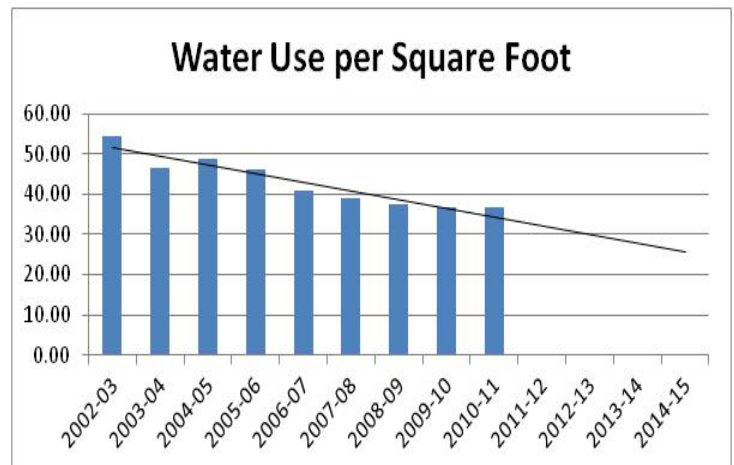
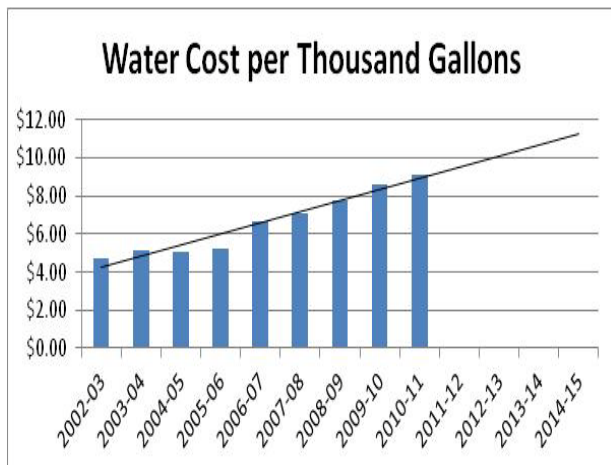
The Utility Savings Initiative was created to coordinate state agencies and UNC system institutions in their efforts to manage and reduce energy consumption and cost. The initiative is managed by the North Carolina Energy Office. The services provided by the Energy Office are now available to all state agencies, UNC institutions, community colleges, public school systems, county and municipal governments. The services include: training, provided by both Energy Office staff and contract instructors; energy audits; and assistance with implementing performance contracts.

In September 2001 the General Assembly enacted N.C.G.S. 143-64 requiring each state agency and university to develop and implement an energy management plan. In February 2002 The Governor's Commission to Promote Government Efficiency and Savings on State Spending was created. Flowing out of the work of the commission, in July 2002, the initiative was launched to fulfill the requirements established in G.S. 143-64. The Energy Office was designated by then Gov. Mike Easley to guide agencies in their efforts and to administer the program. Today a four-person staff oversees implementation of the program among many other duties.

### **PROGRAM STATUS:**

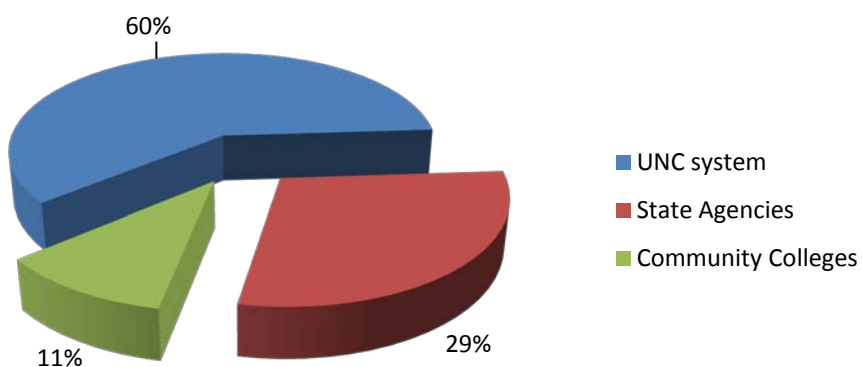
Fifteen state agencies and twenty one UNC institutions are required to submit an annual update to their strategic energy plan and their annual consumption and cost report. One state agency, the Department of Agriculture and Consumer Services failed to submit the required reports. The Energy Office is currently working with this agency to bring it into compliance. All UNC institutions submitted their reports.





Type	Amount	Percent
Electricity	\$200,144,417	53%
Natural gas	\$47,234,317	13%
Fuel oil	\$7,071,521	2%
Propane	\$7,924,252	2%
Steam	\$50,225,273	13%
Chilled water	\$20,357,815	5%
Water/ sewer	\$44,502,118	12%
Total	\$377,459,713	

## Utility Cost by Participant



Participant	Amount	Percent
UNC system	\$226,757,103	60%
State Agencies	\$109,549,516	29%
Community Colleges	\$41,153,094	11%
Total	\$377,459,713	

The table below lists participating agencies and institutions.

STATE AGENCIES	Plan	Use	UNC INSTITUTIONS	Plan	Use
JUVENILE JUSTICE & DELINQUENCY PREV.	yes	yes	UNC GENERAL ADMINISTRATION	yes	yes
AGRICULTURE AND CONSUMER SERVICES	NO	NO	UNC CHAPEL HILL	yes	yes
ADMINISTRATION GENERAL	yes	yes	NC STATE UNIVERSITY	yes	yes
DOT GENERAL	yes	yes	UNC GREENSBORO	yes	yes
DENR GENERAL	yes	yes	UNC CHARLOTTE	yes	yes
DHHS	yes	yes	UNC ASHEVILLE	yes	yes
CORRECTION GENERAL	yes	yes	UNC WILMINGTON	yes	yes
CULTURAL RESOURCES GENERAL	yes	yes	EAST CAROLINA UNIVERSITY	yes	yes
CRIME CONTROL & PUB. SAFETY GEN.	yes	yes	NC A & T STATE UNIVERSITY	yes	yes
INFORMATION TECHNOLOGY SERVICES	yes	yes	WESTERN CAROLINA UNIVERSITY	yes	yes
CRIMINAL JUSTICE TRAINING west	yes	yes	APPALACHIAN STATE UNIVERSITY	yes	yes
JUSTICE ACADEMY east	yes	yes	UNC PEMBROKE	yes	yes
WILDLIFE RESOURCES	yes	yes	WINSTON-SALEM STATE UNIVERSITY	yes	yes
EMPLOYMENT SECURITY COMMISSION	yes	yes	ELIZABETH CITY STATE UNIVERSITY	yes	yes
STATE PORTS AUTHORITY	yes	yes	FAYETTEVILLE STATE UNIVERSITY	yes	yes
			NC CENTRAL UNIVERSITY	yes	yes
			NC SCHOOL OF THE ARTS	yes	yes
			UNC HOSPITALS	yes	yes
			NC SCHOOL OF MATH & SCIENCE	yes	yes
			UNC-TV	yes	yes
			ARBORETUM	yes	yes

The following energy, water and green house gas evaluations were performed on the data submitted by the agency and university participants since the start of the program.

	ENERGY EVALUATION					
	costs avoided	cost /gsf	cost/mmbtu	cost/mmbtu %change	btu/sf	btu/sf %change
2002-03		\$2.02	\$12.949		155,754	
2003-04	\$24,481,673	\$1.87	\$13.607	5%	137,449	-12%
2004-05	\$25,115,568	\$1.99	\$14.315	11%	138,705	-11%
2005-06	\$34,916,260	\$2.26	\$16.536	28%	136,420	-12%
2006-07	\$37,360,350	\$2.18	\$16.171	25%	134,962	-13%
2007-08	\$49,179,146	\$2.37	\$17.899	38%	132,344	-15%
2008-09	\$43,990,519	\$2.49	\$18.320	41%	135,780	-13%
2009-10	\$50,050,148	\$2.45	\$18.349	42%	133,454	-14%
2010-11	\$62,638,643	\$2.39	\$18.592	44%	128,470	-18%
	\$327,732,307			30% target	109,028	

	WATER/SEWER EVALUATION				
	water costs avoided	cost/kgal	cost/kgal %change	gal/sf	gal/sf %change
2002-03		\$4.77		54.48	
2003-04	\$4,113,517	\$5.16	8%	46.38	-15%
2004-05	\$2,908,311	\$5.08	7%	48.91	-10%
2005-06	\$4,791,306	\$5.25	10%	46.12	-15%
2006-07	\$9,979,068	\$6.67	40%	41.01	-25%
2007-08	\$12,801,536	\$7.09	49%	39.10	-28%
2008-09	\$15,765,809	\$7.74	62%	37.54	-31%
2009-10	\$18,735,890	\$8.57	80%	36.61	-33%
2010-11	\$20,255,410	\$9.16	92%	36.57	-33%
	\$89,350,847				

**\$417,083,154 TOTAL UTILITY COSTS AVOIDED**

The \$417 million was realized from an investment of approximately \$11.5 million in state appropriated funds.

GREEN HOUSE GAS EVALUATION					
	Metric Tons Avoided	metric tons/ thousand sf	%change	CO2e Metric Tons	% change
2002-03		14.70		1,206,313	
2003-04	134,344	13.34	-9%	1,310,845	9%
2004-05	135,304	13.39	-9%	1,377,769	14%
2005-06	144,018	13.38	-9%	1,461,751	21%
2006-07	173,666	13.14	-11%	1,460,209	21%
2007-08	193,513	13.05	-11%	1,532,238	27%
2008-09	186,880	13.15	-11%	1,580,761	31%
2009-10	207,046	13.01	-12%	1,591,411	32%
2010-11	250,799	12.67	-14%	1,564,789	30%
	<b>1,173,748</b>	<b>Total Metric Tons CO2e Avoided</b>			

Beginning with the 2007-08 fiscal year, community colleges were required to submit annual energy consumption and cost reports to the Energy Office. For the fourth straight year there has been 100% participation. While not required to submit strategic energy plans, 32 colleges have submitted updated energy plans for 2011 – 2012. Below is the list of community colleges participating in the Utility Savings Initiative program.

COMMUNITY COLLEGE	Plan	Use	COMMUNITY COLLEGE	Plan	Use
A-B Tech		yes	Wayne		yes
Caldwell		yes	Western Piedmont		yes
Cape Fear	yes	yes	Wilkes		yes
Catawba Valley	yes	yes	Wilson		yes
Central Carolina		yes	Craven		yes
Central Piedmont		yes	Pamlico		yes
College of the Albemarle		yes	Tri-County		yes
Davidson	yes	yes	Robeson	yes	yes
Durham Tech	yes	yes	South Piedmont	yes	yes
Fayetteville Tech	yes	yes	Bladen	yes	yes
Forsyth Tech	yes	yes	Carteret	yes	yes
Gaston		yes	Cleveland		yes
Guilford Tech	yes	yes	Edgecombe	yes	yes
Southwestern		yes	Halifax	yes	yes
James Sprunt	yes	yes	Haywood		yes
Isothermal		yes	Martin	yes	yes
Lenoir	yes	yes	McDowell Tech		yes
Coastal Carolina	yes	yes	Montgomery	yes	yes
Pitt	yes	yes	Nash		yes

Randolph	yes	yes	Roanoke-Chowan	yes	yes
Richmond	yes	yes	Sampson	yes	yes
Rockingham	yes	yes	Blue Ridge		yes
Rowan-Cabarrus		yes	Johnston		yes
Sandhills	yes	yes	Piedmont	yes	yes
Southeastern	yes	yes	Vance-Granville		yes
Surry	yes	yes	Mayland		yes
Alamance	yes	yes	Stanly	yes	yes
Wake Tech		yes	Mitchell	yes	yes
Beaufort	yes	yes	Brunswick		yes

## SECTOR DETAILS:

### State Agencies

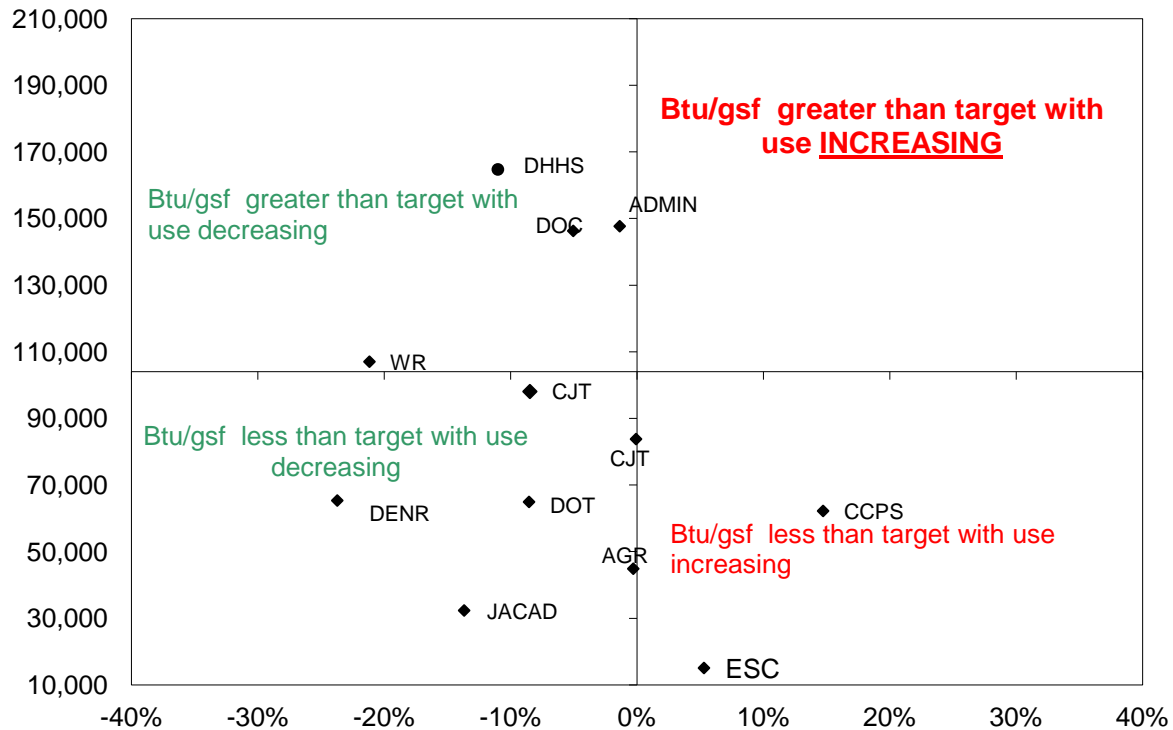
Fifteen state agencies participate in the Utility Savings Initiative program. All participating agencies, with the exception of Information Technology Services, are reducing their consumption as measured against the baseline or have an indexed consumption below the target value of 109,000 Btu per square foot per year (Btu/sf/yr).

American Recovery and Reinvestment Act energy-related funds were made available to state agencies through the N.C. Energy Office. Six agencies applied for grants and of that number all six received funding totaling \$4.6 million and leveraging an additional \$660,000. Projects executed using these funds are scheduled for completion by December 2011. Therefore the full impact of the grants on energy use will not be seen in the reported data until fiscal year 2012-13.

Other state agencies that did not apply for or receive funding for ARRA projects are working with the USI team, reviewing their energy use and costs and identifying programs and projects to realize reductions.

The state agencies will continue to concentrate on implementing their ARRA projects and properly documenting energy reductions. The USI team is working closely with those agencies affected by the agency reorganization to make sure all reporting remains accurate and meets the requirements of the consolidated departments.

## STATE AGENCY Btu/gsf and % REDUCTION



ITS values do not plot within chart. Their Btu per gsf = 418,840 which is a 53% increase from the baseline year.

AGR did not report this year therefore 2009-10 data is plotted

### Agency Name and Abbreviation

ADMINISTRATION	ADMIN
AGRICULTURE	AGR
CRIME CONTROL & PUBLIC SAFETY	CC&PS
CULTURAL RESOURCES	CRES
DEPARTMENT OF CORRECTION	DOC
TRANSPORTATION	DOT
HEALTH AND HUMAN SERVICES	DHHS

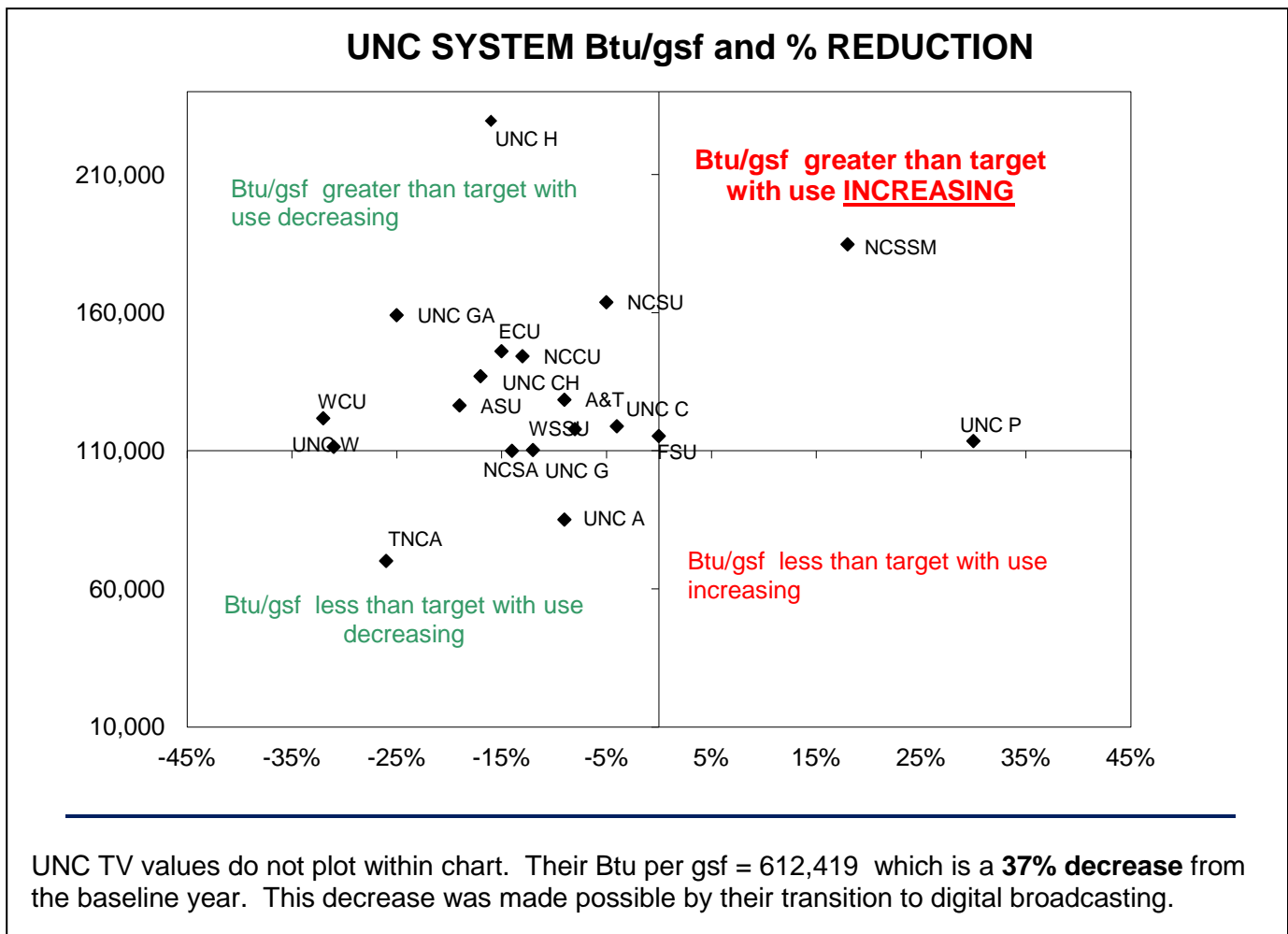
EMPLOYMENT SECURITY COMMISSION	ESC
INFORMATION TECHNOLOGY SERVICES	ITS
JUSTICE ACADEMY west	CJT
JUSTICE ACADEMY east	JACAD
STATE PORTS AUTHORITY	PORTS
DENR	DENR
WILDLIFE RESOURCES	WR

## University of North Carolina Institutions

Twenty-one University of North Carolina institutions participate in the Utility Savings Initiative program. The 21 institutions include the 16 university campuses, UNC Hospital, UNC General Administration, the School of Science and Mathematics, UNC TV and the N.C. Arboretum. Three institutions have already achieved the required 30% reduction in energy consumption. The institutions are: UNC at Wilmington 31%, Western Carolina University 32% and UNC TV 37%.

American Recovery and Reinvestment Act funds were made available to all UNC institutions. Fifteen institutions applied for grants and all fifteen received funding totaling \$7.4 million and leveraging an additional \$1.8 million. As in the case of state agencies, projects executed using these funds are scheduled for completion by December 2011. Therefore the full impact of the grants on energy use will not be seen in the reported data until fiscal year 2012-13. Energy manager positions were funded through ARRA to provide assistance with required energy consumption reporting, energy surveys, energy plan updates or creation and performance contract implementation. These positions will be funded through March 31, 2012.

The UNC institutions will use the coming year to focus on completing their ARRA projects and properly documenting energy reductions. This is critical for the institutions since the passage of SL2010-196. Ten universities are also working through the process to implement performance contracts.



### Institution Name and Abbreviation

UNC GENERAL ADMINISTRATION	UNC GA
UNC CHAPEL HILL	UNC CH
NC STATE UNIVERSITY	NCSU
UNC GREENSBORO	UNC G
UNC CHARLOTTE	UNC C
UNC ASHEVILLE	UNC A
UNC WILMINGTON	UNC W
EAST CAROLINA UNIVERSITY	ECU
A & T STATE UNIVERSITY	A&T
WESTERN CAROLINA UNIVERSITY	WCU
APPALACHIAN STATE UNIVERSITY	ASU
UNC PEMBROKE	UNC P
WINSTON-SALEM STATE UNIVERSITY	WSSU
ELIZABETH CITY STATE UNIVERSITY	ECSU
FAYETTEVILLE STATE	FSU
NC CENTRAL UNIVERSITY	NCCU
NC SCHOOL OF THE ARTS	NCSA
UNC HOSPITAL	UNC H
NC SCHOOL OF SCIENCE & MATH	NCSSM
THE NC ARBORETUM	TNCA

### Community Colleges

Since the 2007-08 fiscal year community colleges have been required to report their energy consumption and cost to the Energy Office. For all four years there has been 100% participation. Forty-one community colleges applied for federal Recovery Act grants and of that number 25 (61%) received funding totaling \$4.1 million and leveraged an additional \$1.9 million. All 41 colleges submitted energy plans and consumption reports in order to be considered for a grant.

Eighteen regional energy managers were hired to assist the community colleges using federal Recovery Act funds. Each manager serves multiple campuses and provides assistance with required energy consumption reporting, energy surveys, energy plan updates or creation and performance contract implementation. These positions will be funded through March 31, 2012.

### K-12 Public Schools

There are 115 school districts in the state. While the public schools have no statutory requirements under the Utility Savings Initiative program, all Energy Office services are available to assist them with managing utility consumption and costs. Fifty-five school districts applied for federal Recovery Act grants and 33 (60%) received funding totaling \$4.9 million leveraging \$3.2 million. All 55 districts submitted energy plans and consumption reports to be considered for a grant. The act of creating a plan and applying for a grant highlighted the need for school systems to implement energy efficiency and conservation measures to better manage utility costs. Many of these institutions are now turning

to performance contracting as a method of meeting this need. The USI team is assisting 11 public school systems with this process by providing education, technical support, templates, forms, review of proposals and technical analysis.

## County Governments

County governments have no statutory requirements under the Utility Savings Initiative program. All Energy Office services are available to counties to assist them in managing utility consumption and costs. Ten counties received direct federal Recovery Act funding through the Energy Efficiency and Conservation Block Grant program. Of the remaining 90 counties, 52 applied for Recovery Act grants and 28 (54%) received funding totaling \$3.8 million leveraging \$1.8 million. All 52 counties submitted energy plans and consumption reports to be considered for a grant. As is the case with public schools the act of creating a plan and applying for a grant highlighted the need for counties to implement energy efficiency and conservation measures to better manage utility costs. Many of these institutions are now turning to performance contracting as a method of meeting this need. The USI team has been approached by nine counties to assess whether they are candidates for performance contracting.

## Municipal Governments

As with county governments, municipal governments have no statutory requirements under the Utility Savings Initiative. All Energy Office services are available to the municipalities to assist them with managing utility consumption and costs. Cities with a population greater than 35,000 received direct federal Recovery Act funding through the Energy Efficiency and Conservation Block Grant program. Twenty two cities qualified for these funds. Of the remaining 530 municipalities, 90 applied for Recovery Act grants and 46 (51%) received funding totaling \$5.2 million leveraging \$4.0 million. All 90 municipalities submitted energy plans and consumption reports to be considered for a grant. All applicants received technical assistance from the federal ARRA funds. Here too, as with other local government units we have seen an increased interest in performance contracting. We are currently working with six municipal governments.

## **RECOMMENDATIONS:**

**University Energy Savings (Session Law 2010-196):** allows UNC institutions to keep the documented energy savings if there is a credit balance in their utility account. This provides a method to reinvest energy savings in future projects.

The Energy Office recommends that this program should be expanded to include State Agencies. This change will require language to be inserted in a different Chapter.

### **"§ 116-30.3B. Energy conservation savings.**

(a) In addition to the funds carried forward under G.S. 116-30.3, the General Fund current operations appropriations credit balance remaining at the end of each fiscal year for utilities of a constituent institution that is energy savings realized from implementing an energy conservation measure shall be carried forward by the institution to the next fiscal year. Sixty percent (60%) of the energy savings realized shall be utilized for energy conservation measures by that institution. The use of funds under this section shall be limited to onetime capital and

operating expenditures that will not impose additional financial obligations on the State. The Director of the Budget, under the authority set forth in G.S. 143C-6-2, shall establish the General Fund current operations credit balance remaining in each budget code of each institution.

(b) The Director of the Budget shall not decrease the recommended continuation budget requirements for utilities for constituent institutions by the amount of energy savings realized from implementing energy conservation measures, including savings achieved through a guaranteed energy savings contract.

(c) Constituent institutions shall submit annual reports on the use of funds authorized pursuant to this section as required under G.S. 143-64.12.

(d) As used in this section, 'energy savings,' 'guaranteed energy savings contract,' and 'energy conservation measure' have the same meaning as in G.S. 143-64.17."

(e) Energy reductions in this part may be claimed by participants for five years. In the case of a performance contract savings may be tracked and claimed for duration of contract term

#### **§ 143-64.17. Definitions.**

As used in this Part:

- (5) "Qualified provider" means a person or business experienced in the design, implementation, and installation of energy conservation measures who is pre-qualified by the North Carolina State Energy Office.

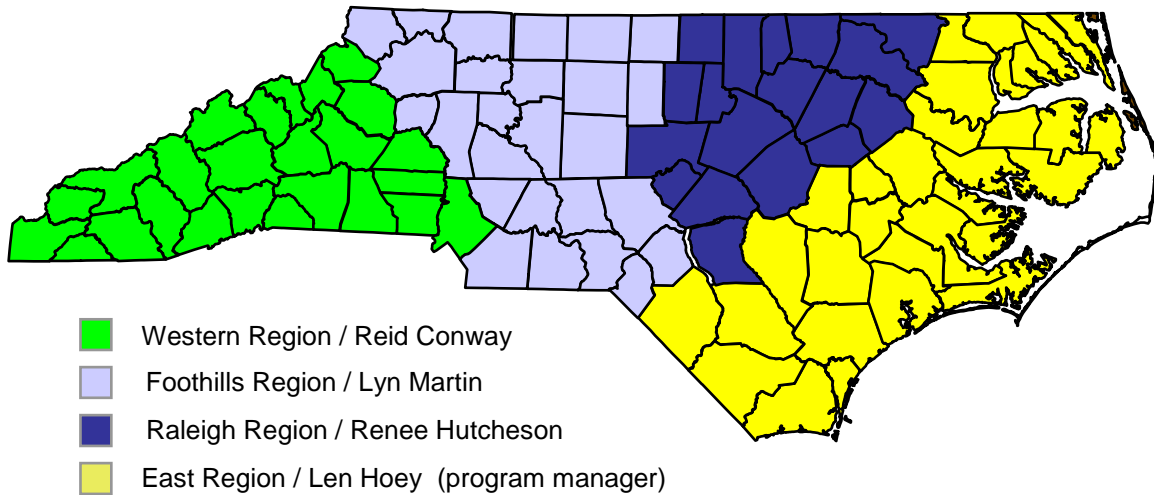
#### **§ 143-64.17A. Solicitation of guaranteed energy savings contracts.**

- (a) Before entering into a guaranteed energy savings contract, a governmental unit shall issue a request for proposals. In the case of a governmental unit wishing to enter into a second performance contract with the same pre-qualified Energy Service Company (ESCO) within four years of signing the original contract the governmental unit may elect to enter directly into an Investment Grade Audit with the ESCO. Notice of the request shall be published at least 15 days in advance of the time specified for opening of the proposals in at least one newspaper of general circulation in the geographic area for which the local governmental unit is responsible or, in the case of a State governmental unit, in which the facility or facilities are located. No guaranteed energy savings contract shall be awarded by any governmental unit unless at least two proposals have been received from qualified providers. Provided that if after the publication of the notice of the request for proposals, fewer than two proposals have been received from qualified providers, the governmental unit shall again publish notice of the request and if as a result of the second notice, one or more proposals by qualified providers are received, the governmental unit may then open the proposals and select a qualified provider even if only one proposal is received.

**Note:** This change has the potential to reduce the time required to enter into a performance contract by up to twenty weeks by allowing the governmental unit not to go through the bid process again for the second contract.

### UTILITY SAVINGS INITIATIVE STAFF:

The Utility Savings Initiative program is organized around providing services with regional staffing as indicated in the map below.



The Utility Savings Initiative Strategic Energy Plan lays out five year strategies and specific tactics to be employed to accomplish our goals over the next year.

# STRATEGIC ENERGY MANAGEMENT PLAN FOR THE UTILITY SAVINGS INITIATIVE PROGRAM

## OVERVIEW:

### **§ 143-64.10. Findings; policy...**

(6) That State government shall undertake a program to reduce the use of energy, water, and other utilities in State facilities and facilities of the State institutions of higher learning and equipment in those facilities in order to provide its citizens with an example of energy use, water use, and utility use efficiency.

The Utility Savings Initiative (USI) was created to coordinate and support the activities of the state agencies and UNC system institutions to manage and reduce energy consumption and cost. Our services are now available to all public sectors: state agencies, UNC institutions, community colleges, K-12 public schools, county and municipal governments. Our services include training, provided by both USI staff and professional instructors, energy audits, strategic energy plan creation and evaluation and project implementation.

The USI program also has responsibility for overseeing Performance Contracting when entered into by state agencies or UNC institutions (see Table II for status). Performance Contracting provides an effective means to design, build and fund energy efficiency projects in the public sector. In 2009, **§ 143-64.17G** was modified such that a local governmental unit that enters into a guaranteed energy savings contract must report the contract and the terms of the contract to the State Energy Office. This change provides consistency in the review process for all governmental units desiring to enter into a performance contract.

## PURPOSE:

### **§ 143-64.12. Authority and duties of the Department; State agencies and State institutions of higher learning.**

(a) ... The energy consumption per gross square foot for all State buildings in total shall be reduced by twenty percent (20%) by 2010 and thirty percent (30%) by 2015 based on energy consumption for the 2002-2003 fiscal year. Each State agency and State institution of higher learning shall update its management plan annually and include strategies for supporting the energy consumption reduction requirements under this subsection. Each community college shall submit to the State Energy Office an annual written report of utility consumption and costs.

The statute referenced above clearly defines the purpose of the USI program. The key performance indicators in Table I are used to track the program's performance in reaching the statutory requirements.

## KEY PERFORMANCE INDICATORS

	energy evaluation						water/sewer evaluation				
year	energy \$ avoided	energy \$/gsf	\$/mmBtu	\$/mmBtu %change	Btu/gsf	Btu/gsf %change	water \$ avoided	\$/kgal	\$/kgal %change	gal/sf	gal/gsf %change
2002-03		\$2.02	\$12.949		155,754			\$4.77		54.48	
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2009-10	\$50,050,148	\$2.45	\$18.349	42%	133,454	-14%	\$18,735,890	\$8.57	80%	36.61	-33%
2010-11	\$62,638,643	\$2.39	\$18.592	44%	128,470	-18%	\$20,255,410	\$9.16	92%	36.57	-33%
2011-12	\$0	\$0.00	\$0.000	0%	0	0%	\$0	\$0.00	0%	0.00	0%
2012-13	\$0	\$0.00	\$0.000	0%	0	0%	\$0	\$0.00	0%	0.00	0%
2013-14	\$0	\$0.00	\$0.000	0%	0	0%	\$0	\$0.00	0%	0.00	0%
2014-15	\$0	\$0.00	\$0.000	0%	0	0%	\$0	\$0.00	0%	0.00	0%
	\$327,732,307						\$89,350,847				
<b>\$417,083,154</b>	TOTAL UTILITY \$ AVOIDED				109,028	-30% target					

TABLE I

**Legend:**

gsf = gross square feet (building size)

Btu = British thermal unit (standard unit of energy)

mmBtu = millions of Btus

mgal = thousands of gallons

**Notes:**

- For an approximate investment of \$11.5 million in state appropriated funds over the nine years the program has been in place we have achieved in excess of \$417 million in avoided utility costs.

The table below shows the status of state agency and UNC institution performance contracts in process and complete.

Agency	Estimated Project \$	Actual Project \$	Project Status	Vendor
DOA Museum of Art		\$4,966,763	Fourth guarantee year complete	Trane
DOA downtown complex		\$21,436,007	Third guarantee year complete	Pepco
UNC Greensboro		\$5,808,994	Third guarantee year complete	Trane
UNC Wilmington		\$4,542,387	Construction complete 10/1/2011	Trane
Appalachian State University		\$5,430,596	Construction complete 3/31/2011	Pepco
NC State University		\$19,700,703	Construction 99% complete	Schnieder
NC State University (Cogen)		\$59,582,948	Construction 20% complete	Ameresco
NC Central University		\$6,532,959	Construction 20% complete	Chevron
UNC Pembroke		\$4,671,851	Approved 7/12/2011	Siemens
Winston Salem State University		\$6,517,358	Approved 9/13/2011	Siemens
Elizabeth City State University		\$5,621,820	Approved 9/13/2012	Honeywell
Department of Correction	\$14,920,040		ESA being negotiated	Noresco
Western Carolina University			IGA Terminated	Con Ed
UNC Asheville			IGA Terminated	Ameresco
UNC Charlotte	\$10,000,000		IGA in process	Ameresco
Department of Transportation	\$9,766,628		ESCO selected	Trane
East Carolina University	\$12,000,000		ESCO selection in process	
UNC Chapel Hill	\$20,000,000		Application approved	
Fayetteville State University	\$2,051,454		Application approved	
Sub-Totals	\$68,738,122	\$144,812,386		
<b>Total potential investment</b>	<b>\$213,550,508</b>			

IGA = Investment Grade Audit  
ESA = Energy Services Agreement

TABLE II

**Note:** Table II represents only state agency and UNC projects. The USI team is assisting 26 local government units with their performance contracts.

### **KEY FOCUS AREAS OF THE PLAN:**

- 1) **Communication and Training** – A core component of the USI program's success has been the ability to provide relevant training to the participants. This training includes the Energy Management Diploma series, Strategic Energy Plan creation and one day technical classes on specific building systems. The USI team routinely participates as invited speakers at conferences and workshops that target our program participants. We will facilitate the creation of 'user groups' to foster dialogue among participants.
- 2) **Effectively Allocate Resources** – Site visits will remain the cornerstone of support to USI participants. We ensure ARRA energy savings are properly documented, that work is performed according to the scope of work in the project request and conduct a final inspection of the project at the time of completion. Team members are available to provide participants technical assistance with audits and project evaluations.
- 3) **Performance Contracting** – The team provides assistance and guidance for USI participants through the entire contract process. Performance contracting is a method of financing, designing and building major projects that have a return on investment in utility costs avoided. It provides a means by which obsolete and inefficient equipment may be replaced using the utility savings to pay for the project.

<b>Focus Area 1: Communication and Training</b>					
Strategy 1.	Provide USI partners with the skills necessary to identify and implement energy efficiency measures				
Strategy 2.	Data review, analysis and reporting of energy use and energy plan information submitted by partners and as required by statute				
Strategy 3.	Create, publish, update annually and implement a state level energy management plan that supports program requirements				
Strategy 4.	Establish regional user groups to foster participant dialogue on best practices				
Strategy 5.	Participate as speakers in relevant workshops and conferences to generate program awareness and participation				
<b>2010-2011 Activities</b>	<b>Measurement</b>		<b>Investment</b>	<b>Assigned to</b>	<b>Funding Source</b>
	<b>Expected</b>	<b>Actual</b>			
Conduct 3 EMD training sessions	75 participants	105	\$133,105	Len Hoey	ARRA
Conduct 3 workshops on creating an energy plan	60 participants	35	Staff time	Len Hoey / USI team	Salary
Develop USI track for annual conference	10-12 sessions	5	Staff time	Renee Hutcheson / USI team	Salary
Create regional USI user groups	4 groups	0	Staff time	Joe Davis / Reid Conway	Salary
Maintain key databases tracking USI performance	USI consumption and liaison databases		Staff time	Len Hoey	Salary
Conduct training session on PC and USI program to various boards and organizations		20	Staff Time	USI team	Salary
<b>2011-2012 Activities</b>	<b>Measurement</b>		<b>Investment</b>	<b>Assigned to</b>	<b>Funding Source</b>
	<b>Expected</b>				
Conduct 3 EMD training sessions	Interviews to assess application of knowledge		\$133,105	Len Hoey	ARRA & state
Conduct one day tech workshops	Interviews to assess application of knowledge		Staff time	USI & NCSU MAE	Salary
EPA portfolio manager pilot program	Evaluate software's applicability for USI reporting		Staff time	Keith Bradshaw	ARRA & salary
Facilitate implementation of user groups and their activities	Publication of best practices identified during meetings		Staff time	USI team	Salary
Targeted technical assistance provided through site visits to upgrade energy plans and consumption reports	100% participation by agencies, universities and community colleges		Staff time	USI team	Salary
Establish electronic bulletin board on USI website	Bulletin board created and promoted to participants		Staff time	USI team	Salary

Other activities without participant level measureable results:

- Provide USI track for annual sustainability conference

Focus Area 2: Resource Allocation					
Strategy 1.	Provide USI participants with on site assistance in evaluating and implementing energy efficiency projects				
Strategy 2.	Effective deployment, implementation and completion of ARRA funded projects				
Strategy 3.	Evaluate new technologies for applicability to USI program				
2010-2011 Activities	Measurement		Investment	Assigned to	Funding Source
	Expected	Actual			
Provide project management for ARRA projects	154 approved projects	All 154 assisted	Staff time	USI team	ARRA
Perform project evaluations for non-funded ARRA grant applications	106 identified projects		Staff time	USI team	ARRA
Work with grant administrator to identify potential appropriate grants	TBD	0 identified	Staff time	Len Hoey / Kathy Walters	Salary
2011-2012 Activities	Measurement		Investment	Assigned to	Funding Source
	Expected				
Provide project oversight for ARRA projects	Project acceptance properly documented for each project		Staff time	USI team	ARRA
Perform project evaluations for non-funded ARRA grant applications	40% of projects identified will be implemented		Staff time	USI team	ARRA
Ensure universities follow procedures to qualify energy savings achieved for carry forward per SL 2010-196	All qualified documented savings carried forward in accordance with legislation		Staff time	USI team	Salary
Fund energy manager positions for community colleges and UNC institutions	Establish scope of work and objectives for energy managers/analysts		\$3,834,000	UNC GA & NCCCS	ARRA
Coordinate activities of ARRA funded energy managers located at community colleges and UNC institutions	Energy managers achieve goals established in ARRA contract scope of work		Staff time	USI team	Salary
Site specific technical assistance in the form of audits and review of audit findings	Determine level of implementation through interview process		Staff time	USI team	Salary

Focus Area 3: Performance Contracting					
Strategy 1.	Provide technical assistance to participants as needed to ensure all statutory requirements are met and the process moves efficiently				
Strategy 2.	Review and edit primary PC documents for use in the specific sectors that are eligible to participate				
Strategy 3.	Re-qualify ESCOs that wish to remain a part of the program, pre-qualify additional companies that wish to provide services.				
2010-2011 Activities	Measurement		Investment	Assigned to	Funding Source
	Expected	Actual			
Remain active in ESC activities	12 meetings	10 attended	Staff time	Len Hoey / Richard Self	Salary
Train new USI team members on the PC process and technical requirements	3 team members	Began training all 3	Staff time	Len Hoey / Richard Self	Salary
Review and edit PC documents	3 docs	ESA	Staff time	Len Hoey / Richard Self / Carolyn Bachl	ARRA & salary
Provide technical assistance to PC projects	20 projects in process	Assisted with 46 projects	Staff time	USI team	Salary
Review necessary documents for certification and re-certification of ESCOs	14 pre-certified	No action	Staff time	Evaluation team	Salary
2011-2012 Activities	Measurement		Investment	Assigned to	Funding Source
	Expected				
Train new USI team members on the PC process and technical requirements	Team members capable of supporting projects from RFP through approval with minimum guidance from engineering manager		Staff time	Len Hoey	Salary
Review and edit PC documents	RFP, IGA and ESA edited, formatted, approved and published for use		Staff time	Len Hoey / Richard Self / Carolyn Bachl	ARRA & salary
Provide technical assistance to PC projects	100% of projects that issue RFP receive COS and/or LGC approval		Staff time	USI team	Salary
Review the documents for pre-qualification and re-qualification of ESCOs	All ESCOs that wish to remain in the program are re-qualified		Staff time	Evaluation team	Salary