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# Energy Management For Congregations

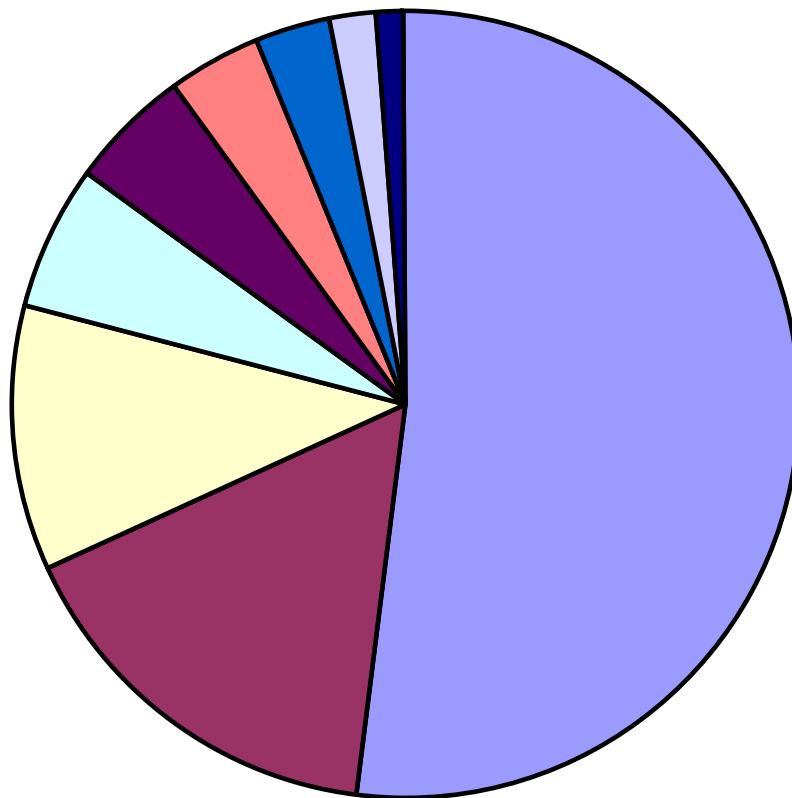
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# Why Care?

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- \$\$ - \$0.25 - \$1.30/square foot (2003)
- Emissions – 4.5 kWh electricity/square foot & 41,500 Btu/square foot
- Mission
  - Apply funds to mission not utilities
  - Educate your congregations

# Typical Congregational Energy Consumption



- Space Heating
- Cooling
- Lighting
- Other
- Water Heating
- Ventilation
- Cooking
- Office Equipment
- Refrigeration



# First Steps

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- Build a team
- Identify some quick successes to build momentum
- Develop short and long term goals
  - (Energy Star? Green Congregation designation?)
- Know what you need to do before you start spending money
  - Know your building
  - Age of building and equipment
  - Typical use patterns (Open every night? Only on Sunday?)
  - Future plans...think strategically

# Pen and Paper Analysis

Collect utility bills – Consult your utility

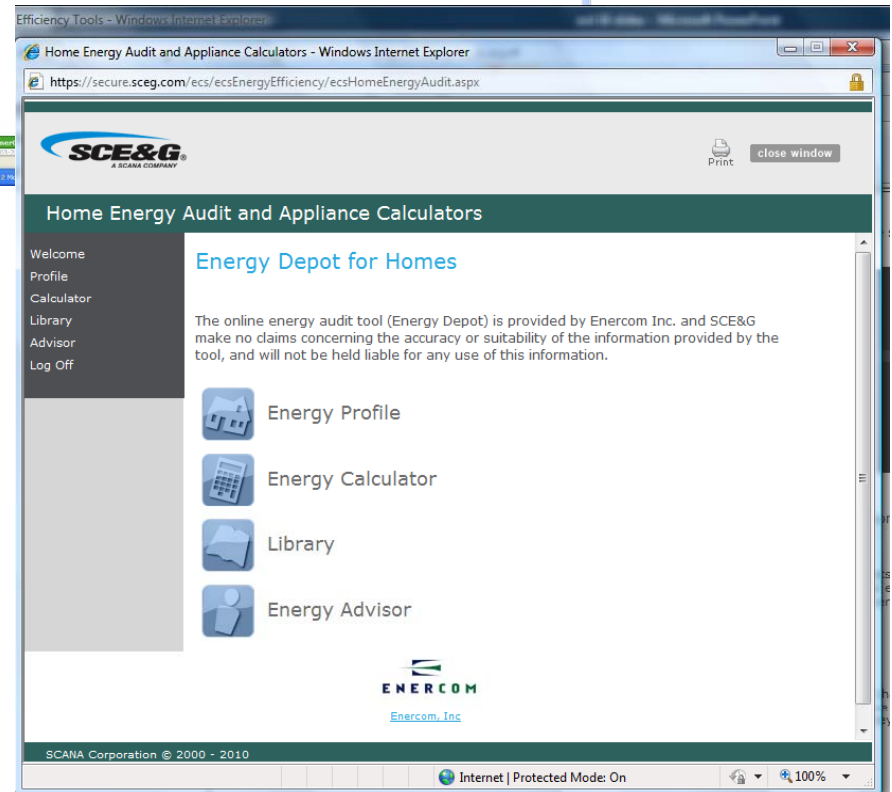
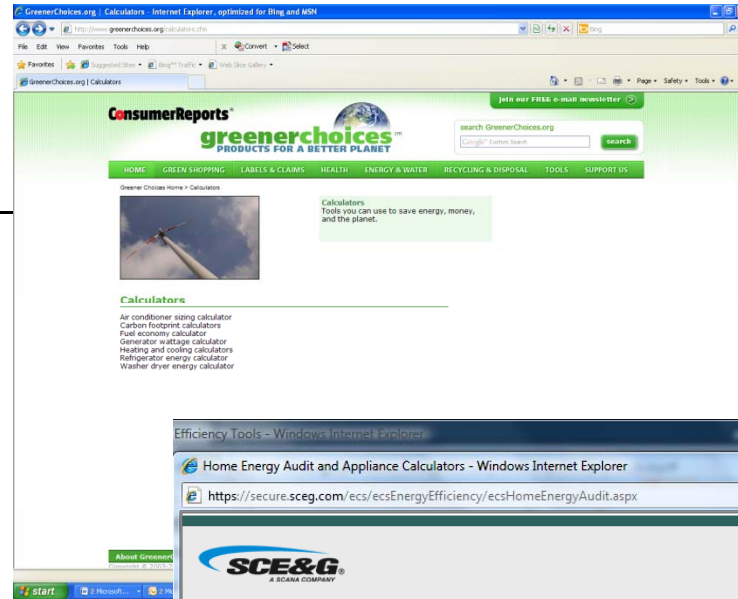
[www.energysavers.com](http://www.energysavers.com)

[www.energystar.com](http://www.energystar.com)

[www.greenerchoices.org/calculators](http://www.greenerchoices.org/calculators)

[www.sceg.com](http://www.sceg.com)

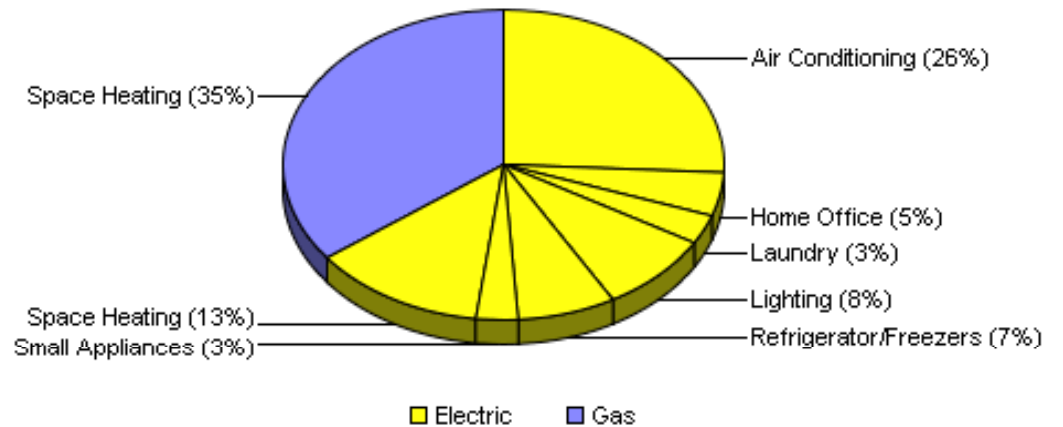
Remember these are very blunt tools!



**Gas**

Appliance	Annual cost	Percentage of total annual energy bill
Kitchen Appliances	\$42	2%
Laundry	\$61	3%
Small Appliances	\$61	3%
Home Office	\$91	4%
Refrigerator/Freezers	\$144	6%
Lighting	\$167	7%
Space Heating	\$255	11%
Water Heating	\$275	12%
Air Conditioning	\$516	22%
<b>Total</b>	<b>\$1,611</b>	

**Mark & Trish's Energy Use 2008**



# Assistance – Energy Plans

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- [www.energy.sc.gov](http://www.energy.sc.gov)
- Public institutions
  - Energy Conservation Planning  
Local Government

[www.energy.sc.gov](http://www.energy.sc.gov)



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## Saving Energy: Public Institutions

### Energy Conservation Planning

Section 48-52-620, Code of Laws of South Carolina, requires all state agencies, school districts and public colleges and universities to develop energy conservation plans to reduce their energy consumption by one percent annually during fiscal years 2009-2013 and by a total of a 20 percent reduction in energy use by 2020, as compared to 2000 levels. These plans are to be submitted to the South Carolina Energy Office.

A Sample Energy Conservation Plan has been developed as a guide to assist you in developing your energy conservation plan. This is not intended as a comprehensive, exhaustive list of goals, strategies and actions – but rather examples to help you in formulating your plan tailored to your institution. It can be found below.

#### Links :

- [Sample Energy Conservation Plan - State Agencies, School Districts, Public Colleges and Universities](#)
- [Sample Energy Conservation Plan - Local Governments](#)

SC ENERGY OFFICE



SC BUDGET AND CONTROL BOARD

## Sample Energy Plan for Local Government

### Section III: Energy Plan Elements

The following is a *sample* of the types of goals, strategies and actions that *could* be included in an energy plan. Please note that these are merely examples and are not to comprise a comprehensive list. You may use this list as a guide in developing the energy plan elements most relevant to your municipality. Depending on the size of your municipality, many of the strategies and measures listed may not apply to your particular situation. In some cases, your plan may focus on only one goal and perhaps only two or three. However, this list is intended to provide examples of energy conservation measures that could be considered as part of a municipality's energy management and conservation plan.

#### Goal A. Implement all appropriate energy conservation measures.

Strategies	Sample Actions	Resources/Responsible Party	Current Status/Deadlines/Comments
1. Evaluate lighting and implement changes.	a. Replace bulbs with more efficient bulbs (CFLs, etc.)	physical plant staff, electrical contractors	
	b. Install motion detectors in copy rooms, conference rooms, etc.	physical plant staff, electrical contractors	
	c. Install vending misers	physical plant staff, electrical contractors	
	d. Install LED exit signs	physical plant staff, electrical contractors	
2. Evaluate controls re HVAC, landscaping, etc.	a. Set/adjust timers for A/C, etc.	physical plant staff, electrical contractors	
	b. Install water sensors for sprinkler systems	vendors, energy mgmt systems maintenance contract	
	c. Expand energy management/building automation system	vendors, energy mgmt systems maintenance contract	
3. Evaluate IT/computer management energy use	a. Purchase Energy Star computers, printers, copiers, etc.	staff, procurement	
	b. Set timers for computers to go into sleep mode	IT staff, software vendors	
	c. Implement virtual server technology or other innovative energy saving computer management actions.	IT staff, software vendors	
4. Evaluate central energy plant for		IDC design services, mechanical	

# Assistance – Financial

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- ConserFund Loan Program
  - 2% interest
  - Can fund retrofits
    - Replacement or modification of lighting, HVAC, building envelope (doors, windows, insulation, roofs); energy control systems systems;
  - Can fund renewables
    - Ground source heat pumps
    - Biomass, solar

# Assistance – Technical/Audit

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- Energy Technical Assistance program

- Assessments are free
- Audits over certain level 50/50 with refund for implementation
- Application at [www.energy.sc.gov](http://www.energy.sc.gov)
  - (Stimulus Information/Technical Assistance Program)
- To date, 4 churches completed, 11 in some stage of the process



# Congregational Education

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3-2-1

- 3 CFLs
- 2 degrees up and down
- 1 mile under speed limit



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Thanks!

For more information:

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