

"CITIZENS FOR CLEAN & GREEN" – CAMPAIGN PLEDGE

I pledge to begin taking the following actions to reduce my carbon footprint, to lower the impacts of my lifestyle on the environment, and to help make Roanoke a greener place to live, work and play. Commit to this pledge online in the *Clean & Green* link at www.roanokeva.gov or mail your contact info with the card on the back to: Ken Cronin, Department of General Services, 215 Church Avenue SW, Roanoke, VA 24011.



TIER 1 COMMITMENTS – Easy

- **Participate in the city's recycling program by recycling aluminum cans, steel, clear glass, paper and plastics (#1, #2).**
 - *Recycled aluminum uses 95% less energy than virgin aluminum from bauxite ore.¹*
- **Adjust your thermostat to 78 °F or higher in summer and 68 °F or lower in winter.**
 - *Energy savings can be as much as 1% for each degree set higher in summer and lower in winter.²*
- **Replace the most frequently used incandescent light bulbs with compact fluorescent light (CFL) bulbs immediately; replace all other incandescent bulbs with CFLs as they burn out.**
 - *Save \$30 over the life of each CFL bulb. If every US home installed 1 CFL bulb, the energy saved would light >3 million homes/year, save >\$600 million/year in energy costs, and prevent greenhouse gases equivalent to the emissions of more than 800,000 cars.³*
- **Turn off lights when not in use; unplug electronics and chargers when not in use; set computers to "power saving mode".**
 - *Enabling computer power management options can save as much as 60-80% of the energy that would have been wasted.⁴*
- **Maintain proper air pressure in vehicle tires.**
 - *Improve fuel economy up to 3%.⁵ Save 50 – 100 gallons of gas per year per vehicle (over 100,000 registered vehicles in Roanoke).*

TIER 2 COMMITMENTS - Moderate

- **Minimize hot water use through installation of water saving fixtures and showerheads, insulating your water heater, and turning down the temperature setting on your water heater.**
 - *Water heating accounts for approximately 20% of total home energy use and costs an average household over \$300 a year.⁶*
- **Plug air leaks around windows, doors and other wall penetrations with weather stripping, caulk or insulation.**
 - *Air leakage can add 10% to your annual energy bill which equates to about \$70 per year for the average home.⁷*
- **Discontinue the daily use of second refrigerators.**
 - *20% of all households use a second refrigerator which is typically 10 years old, uses over 1000 kWh, and costs \$100 to run annually.⁸*
- **Wash clothes in cold water; dry laundry using a clothesline instead of using the dryer whenever possible.**
 - *Heating water accounts for 85-90% of the energy to wash clothes. Dryers are high energy users with no Energy Star models.⁹*
- **Bike, walk, carpool or use public transportation to get to work at least once per week.**
 - *For each individual, a 5 mile roundtrip by car avoided weekly would reduce carbon dioxide emissions by about 200 lbs.¹⁰*

TIER 3 COMMITMENTS – More Difficult

- **Reduce "vampire" energy use with a "smart power strip" that senses when appliances are off.**
 - *Vampire energy can be 5% of residential energy use; taken across all U.S. households, this wastes an estimated 65 billion kWh of electricity, costs consumers more than \$5.8 billion and emits more than 87 billion pounds of carbon dioxide each year.¹¹*
- **Buy a programmable thermostat and set your thermostat back overnight or when the house is empty during the day.**
 - *Save 5 – 10% of the energy and cost to cool/heat your house by setting the thermostat 5 – 10 degrees warmer/cooler.¹²*
- **Seal and insulate ducts for air conditioning and forced air heating systems; check for adequate attic insulation levels.**
 - *In a typical house, 20% of the air that moves through the duct system is lost due to leaks, holes, and poorly connected ducts.¹³*
- **Choose Energy Star appliances and electronic devices whenever purchasing these items.**
 - *Over 30% of all electricity use in a house is for kitchen and laundry appliances.¹⁴*
- **When purchasing a new/used vehicle, select models that get at least 20% better fuel economy than your current vehicle.**
 - *30% of all greenhouse gas emissions in the US are a result of transportation.¹⁵*
- **Measure your carbon footprint and strive to reduce it by at least 2% per year to help Roanoke meet its community wide carbon dioxide emissions reduction goal of 10% over the next 5 years.**



REFERENCES:

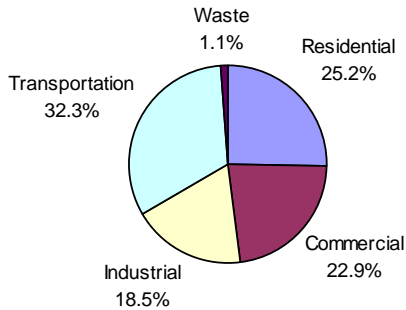
- ¹ www.eia.doe.gov/kids/energyfacts/saving/
- ² http://apps1.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12720
- ³ www.energystar.gov/index.cfm?c=cfls.pr_cfls
- ⁴ Rocky Mountain Institute Home Energy Brief #7 - Electronics
- ⁵ www.fueleconomy.gov/feg/maintain.shtml
- ⁶ Rocky Mountain Institute Home Energy Brief #5 - Water Heating
- ⁷ Rocky Mountain Institute Home Energy Brief #1 - Building Envelope
- ⁸ www.eia.doe.gov/emeu/reps/enduse/er01_us.html
- ⁹ Rocky Mountain Institute Home Energy Brief #6 - Cleaning Appliances
- ¹⁰ 5 mile/week x 52 weeks/yr x 20 lbs CO₂/gallon / 25 mile/gallon = 200 lb CO₂
- ¹¹ www.ucsusa.org/publications/greentips/energy-vampires.html
- ¹² http://apps1.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12720
- ¹³ www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_ducts
- ¹⁴ www.eia.doe.gov/emeu/reps/enduse/er01_us_figs.html#3
- ¹⁵ www.epa.gov/climatechange/emissions/usinventoryreport.html

RESOURCES:

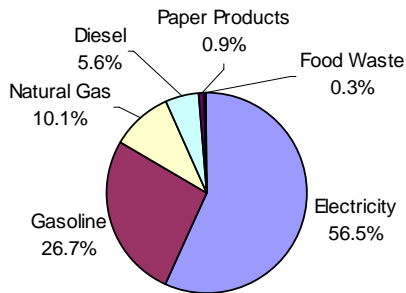
- City of Roanoke recycling bin - request by calling 853-2000 (*press option 1*)
- Free tire pressure gauge/Carpool Matching - RIDE Solutions - www.ridesolutions.org
- Free water-conservation kits - Western VA Water Authority office downtown
- Roanoke bus routes & Star Line Trolley Information - www.valleymetro.com
- Energy Star appliances - www.energystar.gov/
- Vehicle Fuel Efficiency information - www.fueleconomy.gov/
- Carbon Calculator - Roanoke Valley Cool Cities Coalition (RVCCC) - www.rvccc.org
- Rocky Mountain Institute Household Energy Briefs - <http://nc.rmi.org/Page.aspx?pid=217&srcid=217>
- Calculate saving for unplugging your second refrigerator - www.energystar.gov/index.cfm?fuseaction=refrig.calculator

**ICLEI Community Emissions Inventory
Roanoke 2005 Baseline Report**

Roanoke CO₂ Emission by Sector (2005)



Roanoke CO₂ Emission by Source (2005)



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Name: _____

Address: _____

Phone: _____

Email: _____

Check the box if you would like more info about this initiative:

Check the box if you have already completed a carbon footprint:

How many of the other commitments (1 – 15) do you already practice: _____

Check the box if you would like to help your neighborhood or organization participate in this initiative:

Mail to: Ken Cronin, Dept. of General Services, 215 Church Avenue SW, Roanoke, VA 24011.