City of Roanoke Green Initiatives

Nell Boyle LEED AP BD+C
Sustainability Coordinator
City of Roanoke: The Community

- Outreach
- Annual GHG
- Community Programs
- Community Amenities
- Long Term Benefits
City of Roanoke: The Municipality
Roanoke Leads Virginia

2008 - Winner of the FIRST Virginia Municipal League Go Green Virginia Government Challenge

Roanoke has received the Platinum Award since 2009
City of Roanoke Awards and Recognition

- **2009 Governor’s Environmental Excellence Gold** - awards for the “Clean & Green” campaign and the “Carvins Cove Easement”

- **2009, 2014, 2015 Virginia Recycling Association** - 1st Place for outstanding efforts for recycling and waste reduction

- **2012 – 2018 DEQ Sustainability Partner** - The Virginia Environmental Excellence Program

- **2015 DOE’s Better Building Challenge Showcase Project** - Top performing member of the Challenge, recognized for superior improvement based on the Berglund Center Retrofit. **GOAL ACHIEVED 2018!**
Policy and Legislation

City Council passed a resolution to join ICLEI- Local Governments for Sustainability in September 2006

*Roanoke was the first city in Virginia to join ICLEI*
In 2008, City Council committed to “stretch goals” over 5 years, completed in 2014.

Community GHG emissions by 10% 
Achieved 13.4%

Municipal emissions by 12.5 %
Achieved 25%
Tax Incentives

Special Tax Rate for Energy Efficient Buildings:

• Provides a four year, 10% real estate tax decrease for buildings that are 30% more efficient than required by the Uniform Statewide Building Code;

OR

• The building meets performance standards designated by Green Building Initiative, LEED, Earth Craft or Energy Star. Certification must be made by a qualified, registered design professional not related to the applicant.
Tax Abatement for Solar Equipment

The City of Roanoke offers homeowners a property tax exemption for five years on the purchase and installation of solar equipment. The amount of the annual exemption is based on the cost of the equipment and labor to install it. This cost is multiplied by the real estate tax rate.

| City of Roanoke
Residential Real Estate Tax Abatement
Certified Solar Energy Equipment |
| Bill of Sale | Current Real Estate Rate | 1 Year Exemption | 3 Year Exemption |
| $11,000 | $0.0119 | $142.80 | $428 |

Program details:
- Property must be located within the City of Roanoke and the participants must own the real estate.
- The exemption runs with the property regardless of who owns it; therefore, the tax exemption would transfer to any new owner.
- The full amount of the bill of sale is eligible, including equipment and labor.

For more information, contact:
City of Roanoke Permit Office, Municipal Building, Room 170
215 Church Ave, SW Roanoke, VA 24011
540.855.1090

Property owner completes an application and attaches a copy of the bill of sale and submits it to the Permit Center. A Permit Tech will check the application and confirm the work is complete and has a final inspection.

Installation of solar equipment is completed and a final inspection is completed. Required permits are closed.

The Permit Center will forward the application to the Real Estate Valuation office to have the tax reduction processed.

The Treasurer’s Office will notify citizen of the amount of the tax abatement and when it will begin.

No further action is required by the property owner.
City of Roanoke

SOLSMART BRONZE COMMUNITY

Designated Community
City of Roanoke Green Initiative
Energy: Bringing it Home

HVAC Specialist John McGhee is hired to create an in-house team to self perform mechanical operations in city buildings.

The highest electric savings occurred in the Noel Taylor Municipal Building at 49%.
Focus on Lighting

Replaced halogen bulbs replaced with CFL style floodlights and incandescent lights replaced the mini CFLs timers and light sensors

69% reduction in electric use (2006 - 2010)

$4,212 in electrical costs (2006 – 2010)

$11,300 Estimated labor and materials savings
Market Garage - LED Light Replacement

282 High Pressure Sodium lights to LEDs, payback 11 years

39% electric reduction
$15,000 annual savings
Maintenance savings over 10 years 282 LED’s replace vs 1050 HPS

Before

After
LEED Certified Buildings

- Fire Station 3 - Williamson Rd
- Fire Station 5 - Orange Ave
- Police Academy
- Roanoke City Market
- Registered 811/911 (Dec 2019)
Showcase Retrofit Berglund Center

Department of Energy’s Better Building Challenge recognized for the Berglund Center for:

2014 Exemplary Performance in Energy Savings

- $107,000 in avoided energy costs
- Avoided electric savings by 900,000 kWh
- Daily use down 9%
- Actual cost reduced by $41,074
- Reduced GHG emissions by 57%
Better Building Challenge
2018 GOAL ACHIEVED!!

Portfolio of buildings over 1.1 Million Sq. Ft.
23% ENERGY REDUCTION

Berglund Center Showcase Project
30% ENERGY REDUCTION
Municipal Building Green Roof

- Cost: $57,900
- Installed by City Staff
- Reduces storm water quantity & quality
- Reduces noise
- Can triple life of the roof membrane
- Improves energy efficiency
- Plants reduce fire risk
- Creates natural habitat
Stormwater

Benefits

• Reduces water pollution
• Reduces erosion
• Prevents litter from entering our waterways

Roanoke embraces ENVISION Certification
Alternative Fuels

Biodiesel Use - 5% Mix
• biodegradable and non-toxic
• 60% less CO2 than petroleum

Propane Use - Flex Vehicles & Equipment
• Cleaner
• Less expensive
• Reduces dependence of foreign oil
Propane Equipment and Vehicles

Propane reduce ozone emissions and can be used on “ozone action days.” 85% of propane is produced domestically.

- City has purchased 3 replacement propane mowers
- 15 Propane flex vehicles
City Fleet

- 15 Electric Vehicles
- 10 Hybrid Vehicles
- 15 Propane Flex Vehicles
- **Waste Oil LEAN Project** - synthetic oil, reduce oil waste by 50%
- **Faubs** - Vehicles tracked for fuel consumption
- **Car Share Program**
- **EV Chargers**
Nitrogen Use in City Tires

Over 2 years Fleet’s tire budget dropped by 5%  

24% vs 19%  
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City Owned LED Lights

444 City Streetlights

82% energy savings
50% cost savings
Signal Coordination:
Hershberger, Williamson and Orange Ave Corridors

Traffic light timing improved over 9 miles
Peak traffic travel time reduced by 11%
Delays reduced by 20%, stops reduced by 15%
Reduced Fuel consumption by 10%
Reforestation of Roanoke

- Replacement - planted 500 trees, exceeding tree losses by 100 trees per year

- Preserve mature trees thru regular maintenance

City’s tree canopy goal of 40%
Current canopy at 48%
The Greater Virginia Solar Coop
59 Members
15 Contracts

More to come!

18 signed contracts
95 kW installed
5.17 kW average installation
CITIZENS FOR CLEAN AND GREEN PRESENT: CITY OF ROANOKE GREEN ACADEMY

REGIONAL LITTER CAMPAIGN

Roanoke City Litter Campaign

No ifs, ands, or BUTTS!
DON'T LITTER!

BUTT WHAT?
DON'T LITTER!

No BUTTS about it!
DON'T LITTER!
Single Stream Recycling

WHAT HAPPENED???

Trash and recycling don’t mix 💔

Food, Wood, Hoses, Clothes, Plastics #3 - 7

Cans, Jars, Glass, Paper, Cardboard, Plastics #1 - 2
BRITE
Landscaping for Rights of Way
Green Purchasing

The Purchasing Department was awarded

Leadership in Greener Purchasing Award

Only 2 local governments recognized Chicago and Roanoke
Comprehensive Plan

The City of Roanoke is working on a new Comprehensive Plan that will guide policy decisions and long-term investments in our community until 2040. Here's a project overview:

- **Phase 1: Mobilize** – Reviewed existing plans and current Vision 2020 Plan (Jan.-Mar. 2018)
- **Phase 2: Learn** – Analyzed demographic, economy, housing, and infrastructure data (Feb.-June 2018)
- **Phase 3: Listen** – Open house community meetings and online surveying (July-Sept. 2018)
- **Phase 4: Interpret & Plan** – Working groups draft priorities and policies from input (Oct. 2018-Feb. 2019)
- **Phase 5: Test & Refine** – Policies, actions, and an implementation plan are established (Mar.-June 2019)
- **Phase 6: Finalize & Adopt** – Planning Commission and City Council review (July-Dec. 2019)

City Plan 2040

**Themes**

- Clean and Tidy City
- Clean Energy & Alternative Transportation
- Green Convenience
- Outdoor Recreation
- Water Management
- Sustainable Land Development
- Tree Stewardship
PlanRoanoke.org

Welcoming Roanoke
Share your ideas to help make Roanoke a more welcoming and inclusive community.

Learn More

What do you see in Roanoke’s future?
Please take a few minutes to share your ideas with us in this survey.

SHARE YOUR IDEAS
Quality of Life

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