



Governor's
Energy Office

Can Forests Meet Our Energy Needs? The Future of Forest Biomass in Colorado

**Stacey Simms
Governor's Energy Office**

Agenda

- Introduction to Governor's Energy Office
- BioFuels and Local Fuels Program Overview
- Funding Availability for Community Projects
- Legislative Policies for Biomass Utilization and Forest Health
- Questions

Governor's Energy Office Overview

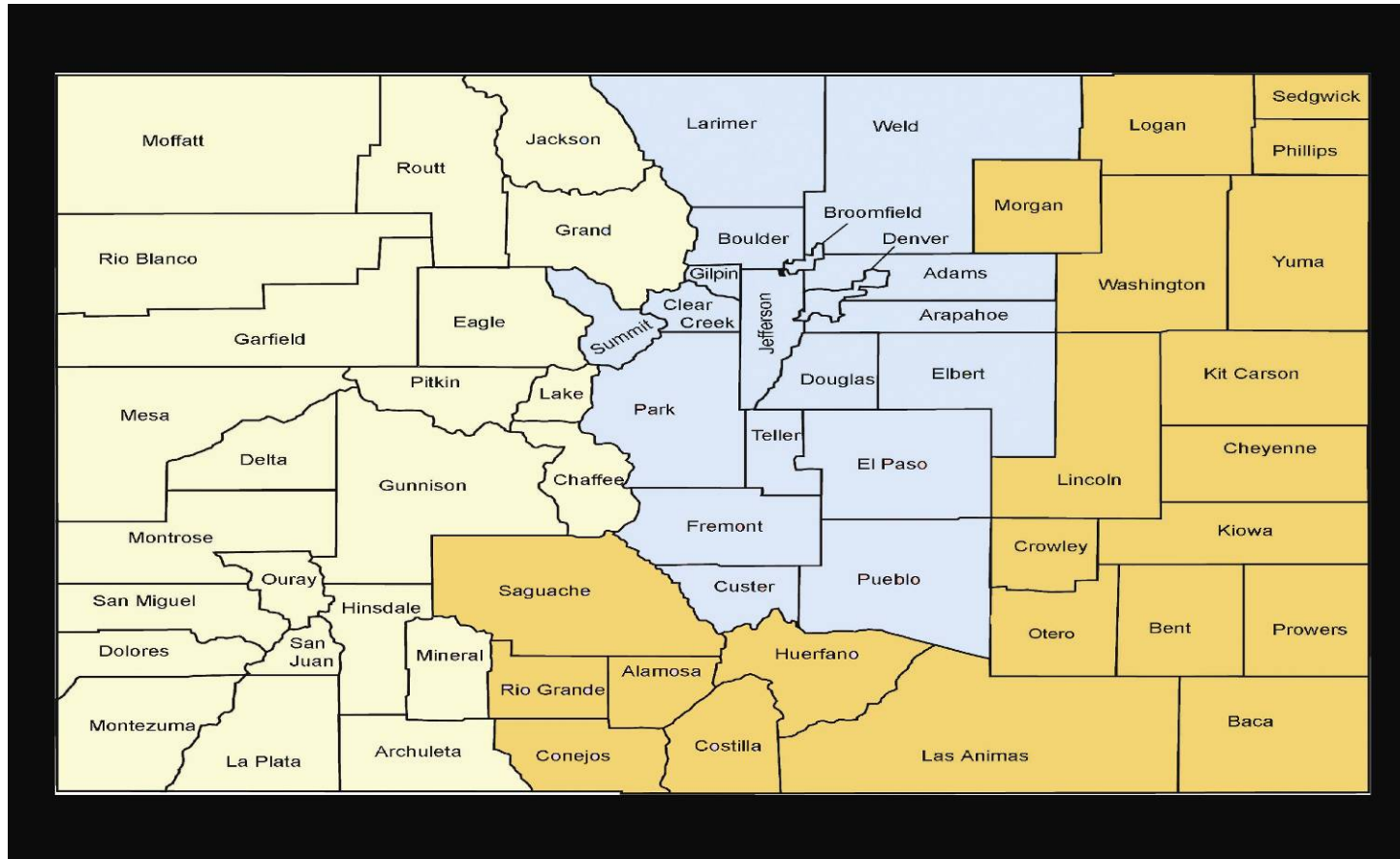


The New Energy Economy Gains Momentum

Gov. Ritter's Executive Order in April 2007 brings a new challenge to the state energy office!

- Governor's Energy Office (GEO), April 2007
- New GEO website and programs, Summer & Fall 2007
- Numerous new projects launched, Fall & Winter 2007
- Energy Experts join the GEO including three regional representatives to help with statewide implementation of programs, Summer 2007

Western, Central & Eastern Regional Representatives for GEO



Western Regional Representative: Joani Matranga, Joani.Matranga@state.co.us

Central Regional Representative: Mona Newton, Mona.Newton@state.co.us

Eastern Regional Representative: Bob Mailander, Robert.Mailander@state.co.us

GEO New Programs Created

- Commercial & Public Building
- Income-Based Energy Services
- Electric & Gas Utilities
- Greening Government
- Residential Energy
- Renewable Energy
- Colorado Carbon Fund



Commercial & Public Buildings Program

New Buildings/Major Renovations

- High Performance Design – SB 51
- LEED Design Assistance grants
- Major focus on new public schools (LEED for Schools)

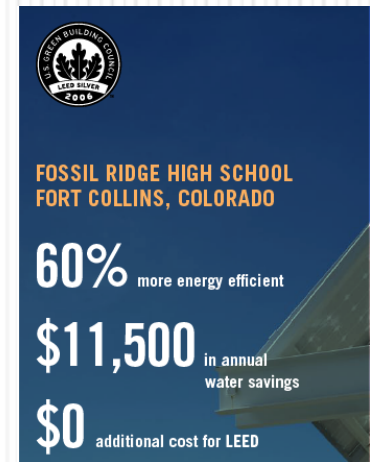
Existing Buildings

- Performance Contracting
- State buildings utility bills management system

Renewable Energy

- In-house design assistance and grants for RE distributed generation projects in new and existing commercial buildings

Program Manager: Jeff Lyng, Jeff.Lyng@state.co.us



Income Based Services

Helping Coloradans in Need Take Control of Their Energy Bills and Usage



Weatherization Services:

- Energy \$aving Partners administers 8 statewide agencies on weatherization services
- Energy-efficiency and renewable energy measures for single and multi-family homes
 - Home Energy Audits
 - Home energy efficiency upgrades
 - “First Response Program:” Low-cost, easy to install measures such as low-flow showerheads, and compact florescent lighting



Electric & Gas Utilities

Utilities have provided the framework for our modern lifestyle and are the backbone of our economy!

- GEO is partnering with utilities and customers to reach ambitious energy efficiency and renewable energy goals

Program Manager: Morey Wolfson,
Morey.Wolfson@state.co.us



Greening Government

State Government to “Lead by Example” to achieve Gov. Ritter’s “Greening Government” Executive Orders goals:

- 20% reduction in paper use
- 10% reduction in water use
- 25% reduction in petroleum use
- 20% reduction in energy use
- 80% reduction in waste



GEO is leading the effort through efficient management and conservation of energy, water, petroleum & paper used in conducting state business.

Program Manager: Angie Fyfe,
Angie.Fyfe@state.co.us



Residential Building

The best defense against rising energy costs is an energy efficient home.

- ENERGY STAR for new homes
- Insulate Colorado
- Financing options
- Energy-code training for building jurisdictions

Program Manager, Eric Stern,
Eric.Stern@state.co.us



Colorado Carbon Fund

Many organizations and individuals want to reduce their “carbon footprints.”



The Colorado Carbon Fund is being established to advance the following objectives:

- Develop a funding source for community-based renewable and energy efficiency projects
- Direct investment monies towards CO-based projects
- Support Colorado’s climate change mitigation objectives

Program Manager, Susan Innis,
Susan.Innis@state.co.us



Energy Policy, Legislation & Resources

GEO is an information resource:

- State energy policy
- Legislative updates
- Grant & other funding sources
- Economic development & technology transfer



Biofuels and Local Fuels Programs

Biofuels and Local Fuels Programs

Biofuels

Liquid fuels for transportations derived from cellulosic materials and agricultural crops

Local Fuels

1. Anaerobic Digester Projects
2. Woody Biomass
3. Waste Water Management
4. Land Fill Gas



Anaerobic Digestion Projects Agriculture

- Biogas collected from covered waste lagoons at confined animal feeding operations (CAFOs) can be used to generate heat and electricity, reducing odors from livestock operations and improving the bottom line for producers.
- The feasibility of collecting biogas from CAFOs depends on the type of animals housed at the CAFO, the waste collection and treatment system being used and other factors.
- Project Development Funding and Feasibility Support are available



Governor's Biofuels Coalition



- Began in late 2005 to promote energy independence, environmental stewardship and economic development
- Managed by steering committee made up of industry and environmental reps, environmental and regulatory entities, distribution companies, biofuels producers and state agencies
- Includes both Biodiesel and E85
- 1st Year Outcomes:
 - 55 Biofuels Stations Developed
 - Over 2 millions gallons sold by new stations

BIODIESEL
MADE OF U.S. GROWN SOY



Biofuels cont:

Colorado Crop

- Colorado needs feedstocks that can be grown in our climate with the constraints we are under
- Promotion and support of Collaboratory and state universities R & D programs
- Promoting R & D for alternative feedstocks

Cellulosic Materials

Agricultural and municipal wastes

Wood residues and biomass



Woody Biomass Projects

- Priorities are to develop community level projects that are sustainable and stimulate markets
- Development of community bio-heating projects
- Projects in high crop shed areas, propane dependent communities and/or high heat loads
- Looking for commercial, industrial and residential projects
- Engagement in R & D for liquid fuel technologies



Why Bio-heating Projects?

- Reduce the need of fossil fuels for heat
(.85 tons of fossil fuels displaced per ton of pellets used)
- Technology is available
- Wood is better used for heat (up to 80% efficient) than for electrical generation (between 30% and 50% efficient)
- Community scaled bio-heating projects are sustainable
- Can address short term problems while also utilizing materials from annual management practices
- Provides alternatives to burning slash piles, prescribed burns and mitigates wildfire damages
- There are currently more than two dozen bio-heating projects being planned throughout the state

Partners and Funding Opportunities

GEO Partnerships

- Colorado State University
- Colorado State Forest Service
- Colorado Parks Service
- Bureau of Land Management
- Colorado Department of Agriculture
- Colorado Wood Utilization & Marketing Program
- National Renewable Energy Lab
- Dept of Energy
- Front Range Round Table
- Dozens of Local Communities
- US Forest Service

Current Funding Available (through June 2008)

1. “Community Biomass for Thermal Usage” program

- \$100,000 available for community bioheating projects

2. Clean Energy “Need” Grant Program

- Requests for Proposals Released February 15th
- Information posted on www.colorado.gov/energy
- Up to \$690,000 available this round

3. Renewable Energy Distribution Generation in Performance Contracting

- Includes biomass projects
- Allows Energy Service Companies additional funding to include renewable energy usage in standard performance contracting
- Up to \$250,000 available



Legislation



2007 The Start of the Green Legislative Sessions

Committed \$6 Million to fund the Collaboratory

- Up to \$2 million/year for three years
- Leverage Federal matching dollars

Doubled the Renewable Portfolio Standard

- From 10% to 20% by 2020
- Included the Rural Electric Coops and Municipal Utilities (10% by 2020)

Clean Energy Fund Legislation ~ \$7M/year

- Help bring technology to the marketplace
- Attract clean tech investment
- Increase energy efficiency and renewable energy across the state

Clean Energy Development Authority

- Attract investment in transmission and clean energy technologies

Wind for Schools Program

- Funds wind turbines for K-12 schools
- Wind Powering America Program

K-12 Building Efficiency Upgrades

- \$1.5M /year for 5 years
- Leveraging over \$80M in upgrades
- Performance contracting

Increase Building Standards

- Adopt 2003 IECC Standard
- Increase energy efficiency for new construction

High Performance Buildings (LEED)

- Require new State buildings to meet LEED standard

Climate Action Plan

- Signed November 2007
- Comprehensive plan to address Global Warming
- Goal is to mobilize Colorado's businesses, governments and citizens in an effort to first slow and then reduce emissions to 20 percent below 2005 levels by 2020.
- Call out for action from Dept. of Natural Resources, Colorado Dept. of Public Health and Environment and Governor's Energy Office
- Additionally, directs these departments to consider whether reforestation and afforestation should be included in the agricultural offset program

Forest Health Advisory Council

Gov. Ritter signs two Executive Orders on Feb. 12, the first creating the Colorado Forest Health Advisory Council, and the second naming the inaugural 24 members to the council that will be co-chaired by Harris Sherman, executive director of the Colorado Department of Natural Resources, and Jeff Janke, State Forester and director of the Colorado State Forest Service.



Members of the Advisory Council

- **The Colorado State Forester**
- **Executive Director of Dept of Natural Resources**
- **Executive Director of Dept of Local Affairs**
- **Executive Director of Dept of Public Health & Environment**
- **Executive Director of GEO**
- **Regional Forester of USFS**
- **State Director of Colorado State Office of BLM**
- **Representative of Colorado Municipal League**
- **Representative of Colorado Counties, Inc**
- **Local Emergency Response**
- **Representation from Warner College of Natural Resources**
- **Governor's Office of Policy**
- **Member of Colorado Senate**
- **Member of Colorado House of Representatives**
- **Up 10 Representatives from NPO, Communities, Environmental orgs etc**

Advisory Council- Short Term Actions

The Council will immediately develop a short-term action plan, addressing:

- Implementation of priorities identified in Community Wildfire Protection Plans;
- Methods to encourage establishment of Forest Improvement Districts;
- Coordinated expansion of economic incentives to reduce forest treatment costs;
- Implementation of landscape-scale stewardship projects; and
- Continuation of the Community Forest Restoration Grant Program.

Advisory Council-Long Term Actions

The Council also will develop long-term strategies for sustainable forest health, addressing:

- A statewide vision to protect communities from fire and restore forest health;
- Guiding principles for the design and implementation of restoration projects;
- A method to monitor and evaluate existing projects and share lessons learned; and
- Ways to increase public awareness about the relationship between healthy forests and clean drinking water, quality wildlife habitat, safe communities, strong economies, and recreational and tourism values.

"Many healthy-forest efforts are already underway," Gov. Ritter said. "This Council will not reinvent the wheel. It will build a better wheel, a faster wheel that maximizes these efforts. This Council is not another study group. It is an action group."

"This is not just about managing a crisis; it's about doing all we can to get ahead of it. It's about being proactive as we consider the future of our forests 25, 50, 100 years from now."

2008, 2009, 2010 Legislation

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Governor's
Energy Office

Save the Date!
Clean Energy Fund Gala
Friday, May 30, 2008

You are cordially invited to attend
A Gala Evening
with
Colorado's energy leaders, luminaries, creators and consumers
Korbel Ballroom, Colorado Convention Center
Denver, Colorado
Friday, May 30, 2008

For more information about the Clean Energy Fund Gala 2008, including sponsorship and volunteer opportunities, please contact Susan Jarvinen at susan.jarvinen@state.co.us or (303) 866-2386. Please check our website at www.colorado.gov/energy in mid-March for more details.

The 2007 Colorado Legislature created the Clean Energy Fund and charged the Governor's Energy Office with administering the fund for the purposes of advancing energy efficiency and renewable energy throughout the state. All funds raised by the Clean Energy Fund Gala 2008 will directly benefit low-income communities and will be used to implement energy efficiency measures and renewable energy technologies to reduce overall energy costs, consumption and provide better structures for living, learning, and working.



Governor's Energy Office

HOME | SEARCH SITE

ADVANCING COLORADO TO A NEW ENERGY ECONOMY

- COMMERCIAL & PUBLIC BUILDINGS
- ELECTRIC & GAS UTILITIES
- GREENING GOVERNMENT
- RENEWABLE ENERGY
- RESIDENTIAL BUILDINGS
- ENERGY POLICY & LEGISLATION
- RESOURCES

You are here HOME

Colorado Climate Action Plan

Download Now! →

Employment and Funding Opportunities Now Available

GEO is now accepting applicants for a number of employment opportunities. Please visit the [Employment and Internships section](#) for more information.

GEO has also announced a number of funding and partnership opportunities. To learn more visit the [Partnership Opportunities section](#).

- #### About Us
- WHO IS GEO
 - E-NEWSLETTERS
 - CONTACT US
 - MEDIA ROOM

- #### Helpful Links
- Greening Government
 - Policy & Legislation
 - Training & Events
 - Low Income Services

Colorado's Leadership Role

The Governor's Energy Office is excited to provide the resources for Colorado's leadership role in the energy landscape. Read more from [Tom Plant, GEO's Director](#)

Connecting Colorado's Renewable Resources to the Markets

Governor's Excellence in Renewable Energy Awards

Governor Ritter announced the winners of his first annual "Governor's Excellence in Renewable Energy Awards" at the 2008 State of the State Address. The awards were created in order to recognize individuals, businesses, institutions, and non-profits that are advancing renewable energy in outstanding ways in Colorado. [Read the press release](#)



Governor's
Energy Office

"The Mission of the Governor's Energy Office is to lead Colorado to a New Energy Economy through energy efficiency, renewable and clean energy resources"

Please call or email with questions:

Governor's Energy Office

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