



From Policy to Programs to Results

Colorado's experience with the new energy economy

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History

- Four years of legislative failure to pass RPS 2001-2004
- Citizen's Initiative passes in 2004 establishing 10% RPS by 2015 for IOUs – 4% Solar Carve-out and Net Metering
- Bill Ritter runs on campaign of a “New Energy Economy” in 2006
- Ritter wins by 15%
- Governor Ritter embarks on comprehensive energy plan to advance the new energy economy in 2007



Colorado before 2006





Governor Bill Ritter and the New Energy Economy





2007 Policies

- Expand the Renewable Portfolio Standard to 20% by 2020
 - Include municipal and rural electric utilities (at 10%)
- Create Clean Energy Fund in State Energy Office
- Energy Efficiency Resource Standard & Incentives
- Energy Efficiency in Building Codes
- Renewable Resource Generation Areas
- Advanced cost recovery for transmission to renewables
- Climate Action Plan – Executive Order
- State “Lead By Example” Energy Reductions – Executive Order



2008 Policies

- PACE Legislation
- Net Metering & Interconnection requirements for Coops and Municipal Utilities
- Clean Energy Finance Program
- Limitations on permitting fees for solar energy



2009 Policies

- Solar Pre-Wire Legislation
- Third Party Solar Ownership
- Allow perpetual roll-over of solar generation credit
- Sales tax exemption for renewable energy
- Tax credits for electric and plug-in hybrid vehicles



2010 Policies

- 30% by 2020 Renewable Portfolio Standard
 - Distributed Generation Standard
- Clean Air Clean Jobs Act
- Solar property tax exemption
- Community Solar Gardens
- Smart Grid Task Force

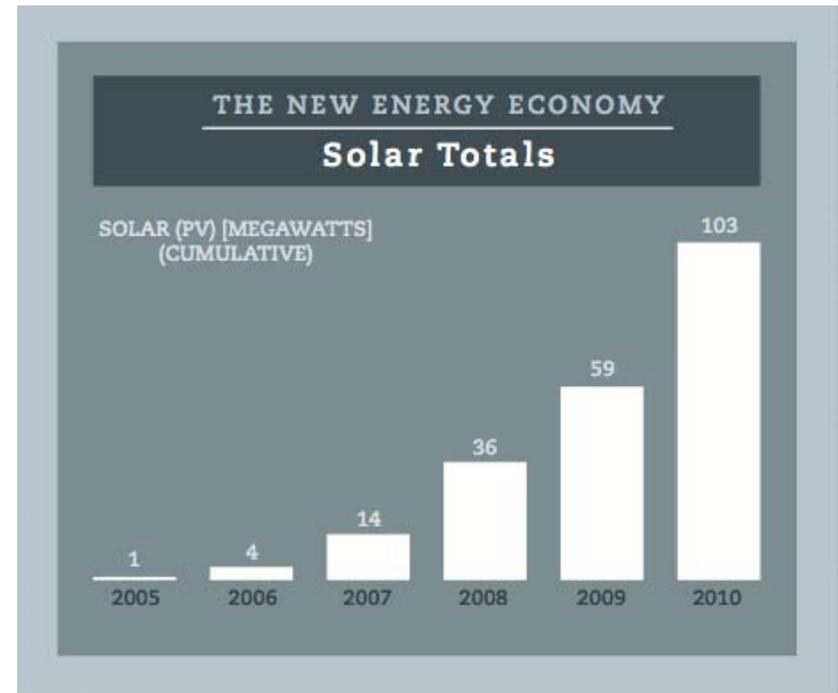


Programs

- Launching of “Recharge Colorado”
- ENERGY STAR™ Incentives
- Statewide Solar and Efficiency rebates
- Building official and homebuilder industry support and training for advanced efficiency codes
- Performance Contracting and High Performance Building design support
- New Energy Economic Development (NEED) Grants
- Low interest loans for commercial businesses to invest in efficiency and renewable energy
- Direct loans to help new energy businesses expand or start up



Results





Job Creation



New Energy Economy Job and Company Announcements Since 2007:

Company	Community	Industry	# of Jobs
2007			
Vestas Blades	Windsor	Wind Energy	600
IBM	Boulder	Green Data Center	100
Abengoe Solar	Lakewood	Solar Energy	65
Iberdrola Renewables	Boulder	Wind Energy	5
2008			
ConocoPhillips	Louisville	Renewable Energy	TBD
RES Americas	Broomfield	Wind Energy	200
Dragon Manufacturing	Lamar	Wind Energy	200
Vestas Towers	Pueblo	Wind Energy	500
Vestas Blades	Brighton	Wind Energy	600
Vestas Nacelles	Brighton	Wind Energy	700
Broadwind Energy	Englewood	Wind Energy	100
Sun Edison	Westminster	Solar Energy	30
Woodward Governor	Fort Collins	Wind Energy	100
Confluence Energy	Kremmling	Biomass Energy	90
Rocky Mtn. Pellet Co.	Walden	Biomass Energy	--
Cameco Global	Broomfield	Carbon Management	10
2009			
HeXcel Energy Corp.	Windsor	Wind Energy	100
Abound Solar	Longmont	Solar Energy	300
Ascent Solar	Thornton	Solar Energy	200
Solla Biofuels	Ignacio	Biomass Energy	10
Prime Star Solar	Arvada	Solar Energy	200
GE Energy Controls	Longmont	Wind Energy	200
Creative Foam	Longmont	Wind Energy	35
E.ON Renewables	Denver	Wind Energy	10
RE Power USA	Denver	Wind Energy HQ	75
Bach Composite	Fort Lupton	Wind Energy	150
UQM Technologies	Frederick	Hybrid Vehicles Parts	78+
SunRun Inc.	Denver	Solar Energy	-
Siemens R&D	Boulder	Wind Energy	50
SMA Solar	Denver	Solar Energy	700
SCB USA	Wheat Ridge	Wind Energy	15
PMC Technology	Golden	Wind Energy	40
SolarCity	Westminster	Solar Energy	40
2010			
SPG Solar	Denver	Solar Energy	5
A+F Sun Carrier USA	Lone Tree	Solar Energy	5
Dacks PMC	Golden	Wind Energy	40
Aluwind	Castle Rock	Wind Energy	30
Abound Solar	Longmont	Solar Energy	300
Vestas R&D	Louisville	Wind Energy	125
Juwi Wind	Boulder	Wind Energy	30
American Zephyr Corp.	Westminster	Wind Energy	30



Focus on Consumer



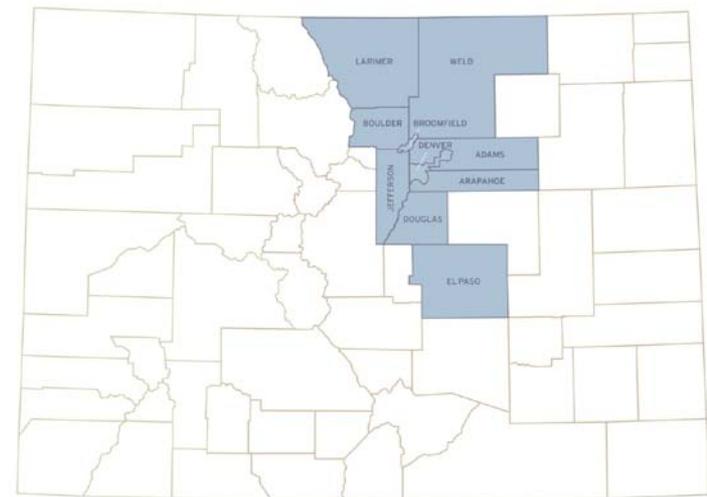
The screenshot shows the RECHARGE COLORADO website. At the top left is the logo. To its right is a navigation menu with links: "Who is the GEO?", "Programs, Policies & Initiatives", "Resource Library", and "News & Events". Below this is another set of links: "Contact Us", "Check Rebate Status", "My Action Plan", and "Login/Register" followed by a search input field and a "GO" button. A horizontal menu below contains five green buttons: "ENERGY ACTION PLANNER", "RESIDENTIAL", "COMMERCIAL & PUBLIC", "CONTRACTORS & RETAILERS", and "COMMUNITY PARTNERS". Below the menu is a "HOME >" link. The main content area features a large photo of a diverse group of people. Below the photo is a dark blue banner with the text "LEARNING BY THE LIGHT OF DAY" and a sub-headline: "An innovative new elementary school in Douglas County, Colorado, brings natural light inside, reducing and energy costs and increasing learning." A "Learn More" button is positioned to the right. At the bottom left of the banner is the text "UP NEXT: HERE COMES OUR SUN." and a row of four small square icons. On the right side of the main content area is a dark blue sidebar with the heading "ENERGY ACTION PLANNER" and sub-heading "ENERGY SAVINGS TIPS". It includes the text "Get Personalized Tips to help you save energy AND money!" and a "GET STARTED »" button. Below this is another section titled "FIND REBATES, INCENTIVES & CONTRACTORS" with the text "Start by entering your zip code below:". This section contains a "Zip Code" input field, a "Sector" dropdown menu currently set to "Residential", and a "GO" button.



Support to the Front Range

- Front Range Sustainability Coordinator's Network
- Working group – EE, RE, residential, commercial
- EECEBG formula grants – EECS
- Access to GEO programs
- Non-profit directory
- Energy Boot Camp
- Recharge Colorado website
- DOE Technical Assistance Program
- Pilot programs with EPA
- Quarterly EECEBG networking

85% of Population lives
on the front range

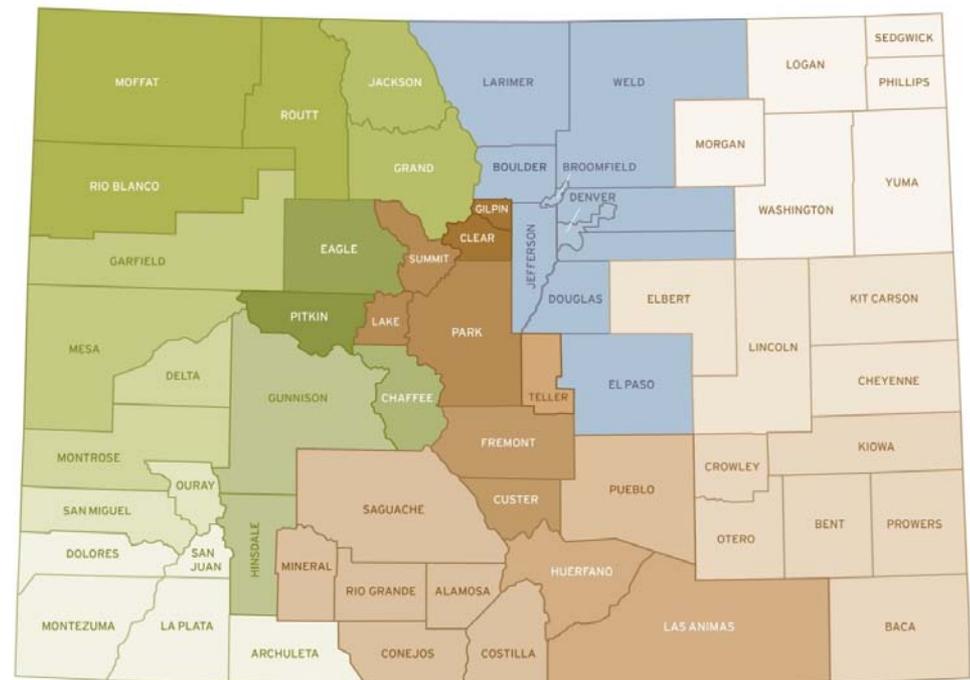




Community Energy Coordinators

- Non-profit or county employee, funded by GEO in “non-entitled” EECBG communities through mid 2012
- A new model to build local capacity – knowledge transfer, leadership transfer
- Bring the New Energy Economy to Colorado’s rural and mountain communities

19 CECs in 54 Colorado Counties





Community Energy Coordinators

- Convene an advisory board made up of community stakeholders
- Energy STRATEGY and Action Plan
- Complete an assessment of GEO programs
- Evangelize Greening Government, including EPC
- Develop a plan for energy code adoption
- Promote, implement GEO programs
- Conduct community outreach / education
- Complete an energy baseline (utility data)
- Include transportation, material management, water





EECBG Community Partners

- Main Street Energy Efficiency
 - Technical assistance
 - Energy auditor equipment
 - Public Education and Outreach
 - Rebates for set-back thermostat, retro-commissioning, lighting

Communities invested \$1,725,000

GEO invested \$1,000,000





EECBG Community Partners

- Residential Energy Efficiency Programs
 - Insulation & air sealing, high efficiency furnace, energy audit, and duct sealing rebates
 - Renewable energy rebates

Communities invested \$1,225,000
GEO invested \$4,682,000





New Energy Communities Initiative

\$10M Partnership
focused on three
areas:

- ❑ Greening Public Facilities
- ❑ Greening Downtowns
- ❑ Greening Homes





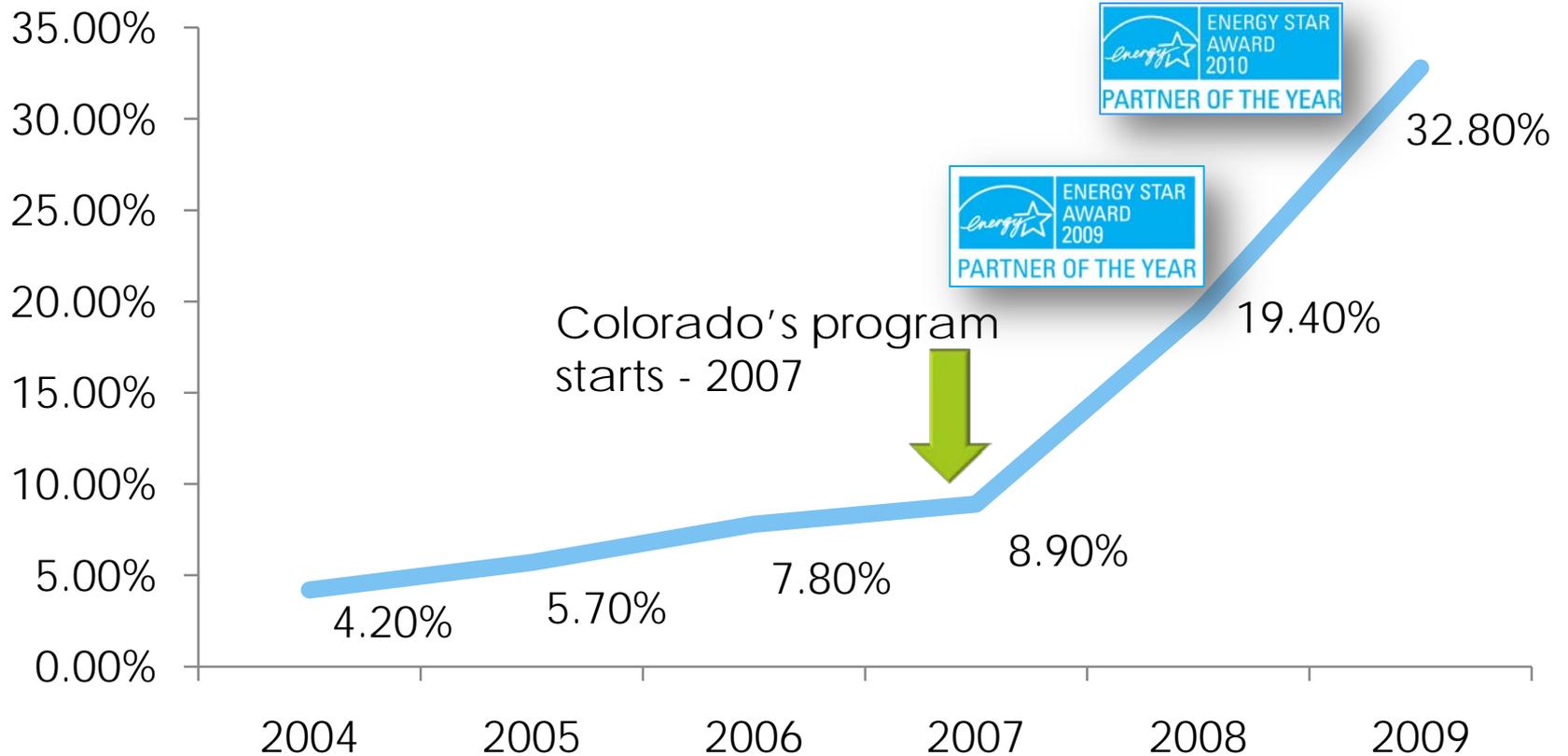
ENERGY STAR New Homes Partners

- Aspen
- Berthoud
- Boulder
- Boulder County
- Breckenridge
- Buena Vista
- Carbondale
- Chaffee County
- Colorado Springs
- Crested Butte
- Denver
- Eagle County
- Fort Collins
- Frisco
- Glenwood Springs
- Grand Junction
- Larimer County
- Longmont Power & Communications
- Mesa County
- Mountain Village
- Mt. Crested Butte
- Parker
- Pitkin County
- Platte River Power Authority
- Poncha Springs
- Poudre Valley REA
- Rifle
- Salida
- San Miguel County
- Severance
- Steamboat Springs
- Summit County
- Telluride
- United Power
- Windsor
- Xcel Energy



ENERGY STAR Homes

% New Home Starts - ENERGY STAR





South Routt School District

- NEED grant - \$75,000 to replace coal boiler with biomass boiler
- Colorado Department of Education - \$2,102,000
- Colorado Department of Local Affairs grant - \$625,000
- In-kind contributions from McKinstry for engineering, biomass boiler installation and other costs
- Bond issue for an additional \$1.5 million
- The \$4.3 million project took 14 months to complete.





Center for the New Energy Economy



CENTER FOR THE NEW ENERGY ECONOMY

HOME +

ABOUT THE CENTER +

THE NEW ENERGY ECONOMY +

PARTNERS +

RESOURCES +

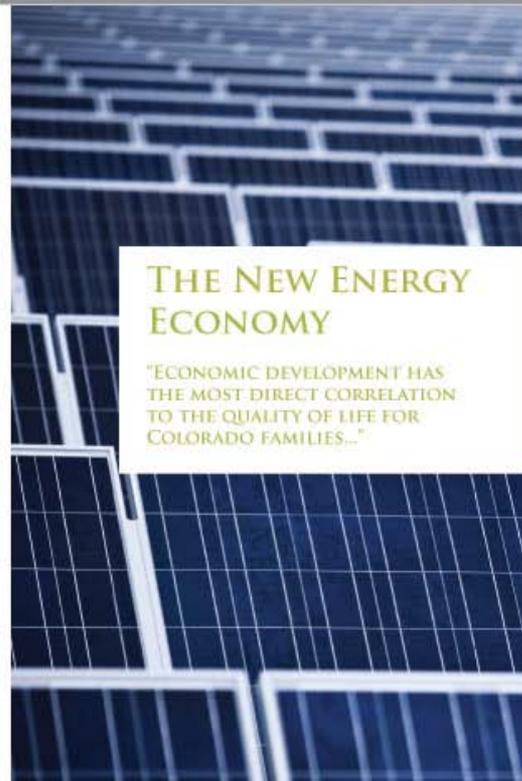
CONNECT +

DOWNLOAD
THE BLUEPRINT FOR THE
NEW ENERGY ECONOMY
(86MB PDF)

School of Global Environmental Sustainability - CSU Energy Supercluster - Colorado Collaboratory

Colorado State University

SCHOOL OF GLOBAL ENVIRONMENTAL SUSTAINABILITY



THE NEW ENERGY ECONOMY

"ECONOMIC DEVELOPMENT HAS
THE MOST DIRECT CORRELATION
TO THE QUALITY OF LIFE FOR
COLORADO FAMILIES..."

AN ECONOMIC REVOLUTION. *A 21st Century Shift.*

"Just as the industrial revolution created the jobs of the 20th century, we now usher in a new century of innovation, creativity and entrepreneurial vigor. The New Energy Economy is creating the pathway to these careers and a new American century of leadership."

— Governor, Bill Ritter, Jr.

The Center for the New Energy Economy will provide policy makers, governors, planners and other decision makers with a road map that will accelerate the nationwide development of a **New Energy Economy**.

RESOURCES

- For Policy Makers
- For Green Industry Professionals
- For Residential Energy Consumers
- For Academics
- For Students

ENERGY JOBS



Thank you



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