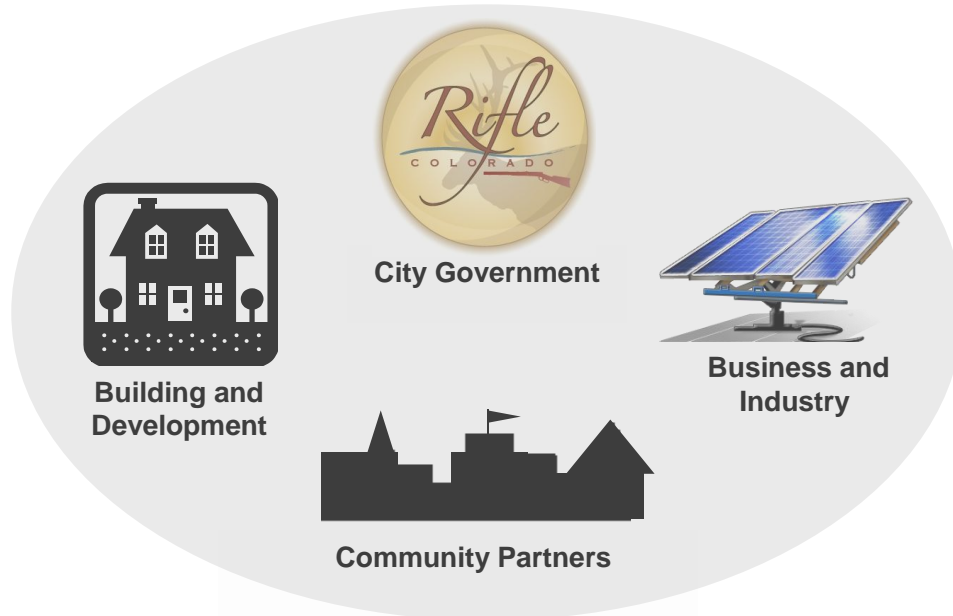


## Rifle, Colorado

# Energy Village Plan (DRAFT)



### Why an Energy Village Plan?

In 2005 the Rifle City Council adopted the *Rifle Economic Opportunities Assessment* that includes a vision of Rifle as an “Energy Village”—a bridge between the traditional fossil-fuel economy and the evolving renewable energy economy. The Energy Village Plan creates a framework to advance this vision.

First the Energy Village Plan identifies how Rifle’s community is affected by energy. The effects of energy and the response of the Energy Village Plan are summarized as follows:

- **The boom and bust economy.** Rifle has experienced the booms and busts of the extractive energy industry. The need for economic diversity has led the City of Rifle to develop renewable energy industries that cushion the busts when they happen. Rifle’s story as a community that bridges the gap between extractive energy and renewable energy was demonstrated by the construction of a 1.72 megawatt solar facility on a former brownfield uranium mill tailings site.
- **Dependency on uncertain energy sources.** Global energy instabilities have an impact on Rifle’s economy through high transportation costs, utility bills, and food prices. By harvesting the energy around us, including solar, biofuels, geothermal and natural gas, Rifle can become more self-sufficient. The Energy Village Plan views natural gas as a dependable local energy source. It is cleaner than other fossil fuels, such as the coal and oil that currently fuel most of our electricity and transportation. Natural gas and renewable energy are compatible and are increasingly working in collaboration. Rifle’s food systems are also

dependent on uncertain energy sources. The Energy Village Plan seeks to increase the supply of, and markets for, local agriculture.

- **Wasted energy and wasted money.** The inefficient way that energy is used today is a drain on the economy. Paying unnecessarily high utility bills in Rifle's homes and businesses sends money out of the local economy, hurting businesses and reducing sales tax revenue. Energy efficiency is one of the most important sources of energy, because the cheapest and cleanest energy is the energy we don't have to use.
- **Impacts on the environment.** Where energy comes from and how energy is used has an effect on the health of the air, water, soil, and ecosystems that future generations of Rifle-ites depend on. By living sustainably and using energy wisely our natural resources can be kept in good health.

## VISION AND GOALS

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### Vision

Rifle shall strive to be a community that bridges the gap between the traditional fossil-fuel economy and the evolving renewable energy economy.

### Goals

The Energy Village Plan identifies four groups within Rifle that play key roles in the Energy Village vision. While there will be overlap between these groups, the plan organizes goals, objectives and action steps around these four groups:

1. **City Government:** lead by example through energy-efficient and sustainable practices in operations, facilities, and planning.
2. **Community Partners:** create partnerships to engage the wider Rifle community in energy efficiency and sustainability efforts—the schools, businesses, hospital, non-profits, and others.
3. **Building and Development:** increase the energy efficiency and sustainability of homes, businesses, and neighborhoods.
4. **Business and Industry:** pursue business development and job creation in renewable energy and sustainable industries.

## 1. CITY GOVERNMENT

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**Goal: The City of Rifle shall lead by example through energy-efficient and sustainable practices in operations, facilities and planning.**

The City of Rifle already has many Energy Village initiatives completed or underway, including:

1. The construction of a 1.72 megawatt solar array on the former site of a uranium mill tailings operation, the largest municipal solar facility in Colorado at its inception. The solar array provides 60% of the power for the city's new Wastewater Reclamation facility.
2. Development of the Energy Innovation Center concept, a green industrial park on city-owned land that already includes the Wastewater Reclamation facility, 1.72 megawatt solar array, a proposed switchgrass research site, and a private composting operation, Caca Loco, that uses municipal sludge.
3. The construction of a 600 kilowatt solar array system that provides 90% of the power needed to pump Colorado River water to the Graham Mesa Water Treatment Plant. Involvement with the Garfield-New Energy Communities Initiative (G-NECI) and Clean Energy Economy for the Region (CLEER).
4. Founding of the Western Colorado Carbon Neutral Biofuels Consortium (WCCNBC) with Colorado Mountain College, Colorado State University, and Flux Farms to test the viability of switchgrass-based ethanol in the area. In December 2009 the consortium received a \$50,000 grant to establish three test sites, one of which is planned to be located on the Energy Innovation Center site.
5. Adoption and implementation of the 2008 Water Conservation Plan and partnership with the EPA's Watersense program.
6. Conducting Energy Star trainings for the local building industry in conjunction with the building of three Habitat for Humanity homes to Energy Star standards.
7. Construction of energy-efficient facilities, including the new Parks Maintenance Facility.
8. Purchase of an energy-efficient hybrid vehicle.
9. Installation of LED street-lighting in the downtown area.
10. Development of a recycling program for City Hall.
11. Adoption of PUD Standards and the 2009 Comprehensive Plan that emphasize energy-efficient and sustainable development patterns.

The City of Rifle has advantages that make leadership in energy and sustainability initiatives a natural role. The City has the ability to access funds and resources from regional, state, and national sources; the opportunity to coordinate with a variety of community partners; and the ability to use City codes, operations, facilities, and planning to implement the Energy Village vision.

**Objective #1:** *Evaluate City energy usage and sustainable practices and set goals for the future.*

1. Baseline current energy and material costs and amounts so that future efficiencies can be measured. Apply GNECI baselining framework.
2. Establish targets for 5 and 10 years out for city operations, facilities, energy use, etc.

3. Identify \$ savings from both past energy efficiency efforts and what future energy efficiency efforts could save.
4. Serve as a collection point for information gathered from organizations, so that the entire Rifle community can be baselined.

**Objective #2:** *Expand energy options in city operations, materials and facilities.*

1. Continue staff, elected official, and public education on energy options, look at examples in other places like Fort Collins Zero Energy District.
2. Investigate opportunities for alternative energy usage and implement where appropriate.
  - a. Renewables with new buildings (solar, geothermal)
  - b. Fleet conversion (biofuels, CNG, electric)
3. Consider efficiency and conservation as an important “energy option”. Analyze operations, materials and purchases for efficiency and conservation.
  - a. Identify items, like bottled water, that are unsustainable and could be reduced.
  - b. Incentives for employees to bike to work, carpool, walk
  - c. Promote on-line bill pay/email bill notices to reduce paper.
4. Incorporate lifecycle cost analysis in decision-making in order to take energy use into account.

**Objective #3:** *Coordinate with other governments and agencies on issues that affect the Energy Village Plan.*

1. Transit issues
2. Energy-improvements financing
3. Legislative and regulatory changes needed on county, state, and federal level
4. Legislative barriers that prevent Rifle from creating its own energy.
5. Land use issues in the county that effect Rifle’s growth.
6. Use services and rebates offered by Xcel.

**Objective #4:** *Lead coordination efforts with local organizations and interactions with private sector and wider community. (see Community Partners section)*

## **2. COMMUNITY PARTNERS**

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**Goal:** *Engage the wider Rifle community in the Energy Village vision—the schools, businesses, clubs, non-profits, and others.*

Energy has effects on all members of the Rifle community. Opportunities to reduce energy costs, promote sustainability, and become more self-sufficient are available throughout businesses and organizations in Rifle.

Many community partners have already taken steps to increase their energy-efficiency and sustainability, including: **(to be gathered from community partners)**

**Objective #1:** *Conduct effective outreach efforts to community partners.*

1. Create formal group composed of members of key organizations to steer Energy Village efforts.
2. Communicate clearly to the community the need for and benefits of this vision without getting ahead of what the community is ready for.
3. Increase public understanding of how energy is used in all aspects of daily life, and the consequences for our community.
  - a. Website.
  - b. Publications (Green Living for Dummies)
4. Have an event that focuses on the sustainability efforts that have already taken place, and give credit to those who have done it.
5. Publicize \$ amounts saved through implementation of the plan, and what could be saved in future.
6. Help with implementation through rebates and other incentives, avoid putting costs on private sector whenever possible.

**Objective #2:** *Identify specific partners and issues in the community where sustainability and energy-efficiency efforts can be supported.*

1. Local agriculture
  - a. Support farmers markets, community supported agriculture and other direct producer-to-consumer methods.
  - b. Support regional efforts to promote local agriculture in schools, restaurants, grocery stores, etc.
  - c. Conduct an ecological footprint study that measures the impact of our food systems and energy systems based on the source of resources.
  - d. Promote the connection between local agriculture, biofuels and open space preservation as economically viable ways of preserving Garfield County's agricultural heritage.
  - e. Support shop local campaigns as a way of boosting the local economy.
2. Work with currently existing businesses to incorporate energy efficiency and renewable energy whenever possible.
  - a. Encourage baselining of energy usage in organizations and to measure progress
  - b. Create a one-stop shop for information and products, find a location in town
  - c. Work with GNECI/CLEER to create a website that has info
  - d. Include Xcel in outreach efforts
  - e. Develop a green guide for businesses program.
  - f. Walmart
  - g. Collaboration with natural gas companies

3. Pedestrian and bike access and promotion
  - a. Bike lanes in appropriate streets
  - b. Safe routes to school program
  - c. Bike to work day
  - d. Finish Rifle Creek Trail and begin to plan new ones
  - e. Improve mountain bike trail system and promotion
4. Composting and recycling
  - a. Seek implementation of curbside recycling
  - b. Promote Caca Loco as a composting facility for yard waste/Christmas trees, etc.

### **3. BUSINESS AND INDUSTRY**

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***Goal: Pursue business development and job creation in renewable energy and sustainable industries.***

The City of Rifle has a goal of developing a diversified economic base. This goal recognizes the importance of our current employment sectors such as the natural gas industry and recreation, while expanding into renewable energy and sustainable industries.

Rifle has many place-based assets that make Rifle well-situated to be a leader in marrying fossil fuels with renewable energy. These assets range from proximity to fossil fuel resources and related industry that is willing to adopt renewable technologies; a location on key transportation corridors; quality of life opportunities for labor; proximity to wealth in the Roaring Fork Valley that is dedicated to renewable energy; and Rifle's position as a rural, inter-mountain west community where sustainable initiatives can be tested and documented.

The centerpiece of Rifle's Energy Village vision is the Energy Innovation Center—approximately 160 acres of city-owned land that the City has designated for renewable energy industries.

The Rifle Economic Development Corporation and the Rifle Chamber of Commerce are key partners in expanding the business and industrial base of Rifle's economy.

***Objective #1: Identify, plan and attract renewable energy businesses and industries to the Energy Innovation Center and other Rifle locations.***

1. Involve UMETCO as a property owner in the Energy Innovation Center concept.
2. Encourage industrial synergies to increase efficiency and reduce waste.

***Objective #2: Strengthen relationships with renewable energy industries, and look for areas where private-public partnerships can create new opportunities.***

1. Biofuels
2. Solar
3. Local partners like CLEER.

***Objective #3: Work with county, state and federal partners to attract industry to Rifle.***

## 4. BUILDING AND DEVELOPMENT

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**Goal:** *Increase the energy-efficiency and sustainability of Rifle's homes, businesses and neighborhoods.*

The City of Rifle has a vested interest in increasing the energy efficiency of our homes and businesses, because energy savings from local households and businesses will stay in the local economy. Currently over 80% of the dollars spent on energy leaves the community. Money not spent on energy bills will be put into our local businesses and will contribute to sales tax revenue and economic growth.

The City of Rifle will work with the local building community to identify what energy efficiency methods are the most cost-effective. Through trainings and partnerships, the City will move towards programs that increase the energy efficiency of Rifle's building stock.

Energy-efficiency and sustainability must also be incorporated into the design of the neighborhood and the City as a whole. The City of Rifle encourages Traditional Neighborhood Design, which creates more energy-efficient and sustainable development by making biking and walking easier, by locating where people work and go to school close by to where they live, and using less energy and water resources. The City has already adopted these principles in its PUD Standards and the 2009 Comprehensive Plan.

**Objective #1:** *Implement programs to improve energy efficiency in new residential and commercial buildings.*

1. Create a working group to make a recommendation on energy code and building code changes.
2. New commercial buildings create User Manuals
3. Investigate and test white roofs as a way to reduce energy costs
4. Xeriscaping and water conservation standards
  - a. Permanent even/odd mandatory water restrictions

**Objective #2:** *Weatherize Rifle's existing building stock to decrease utility bills.*

1. Utilize Xcel's rebates and institutional knowledge in energy efficiency.
2. Promote PACE program as a way to spur home remodels.
3. Promote state (GEO) and potential federal rebates.

**Objective #3:** *On the neighborhood level set high standards for new development around energy, sustainability and "complete neighborhoods" while also making it as easy as possible to meet these high standards through simple city processes and collaborative relationships.*

1. Look to integrate renewable energy into new development through community solar arrays or geothermal.
2. Include bike racks, bike lanes, transit facilities.
3. Investigate transit options including Rifle Circulator route.