Town of Saguache
Strategic Energy Action Plan

Prepared for the Town of Saguache
By:
Saguache Alliance for Green Energy (SAGE)
Colorado Harvesting Energy Network (CHEN)

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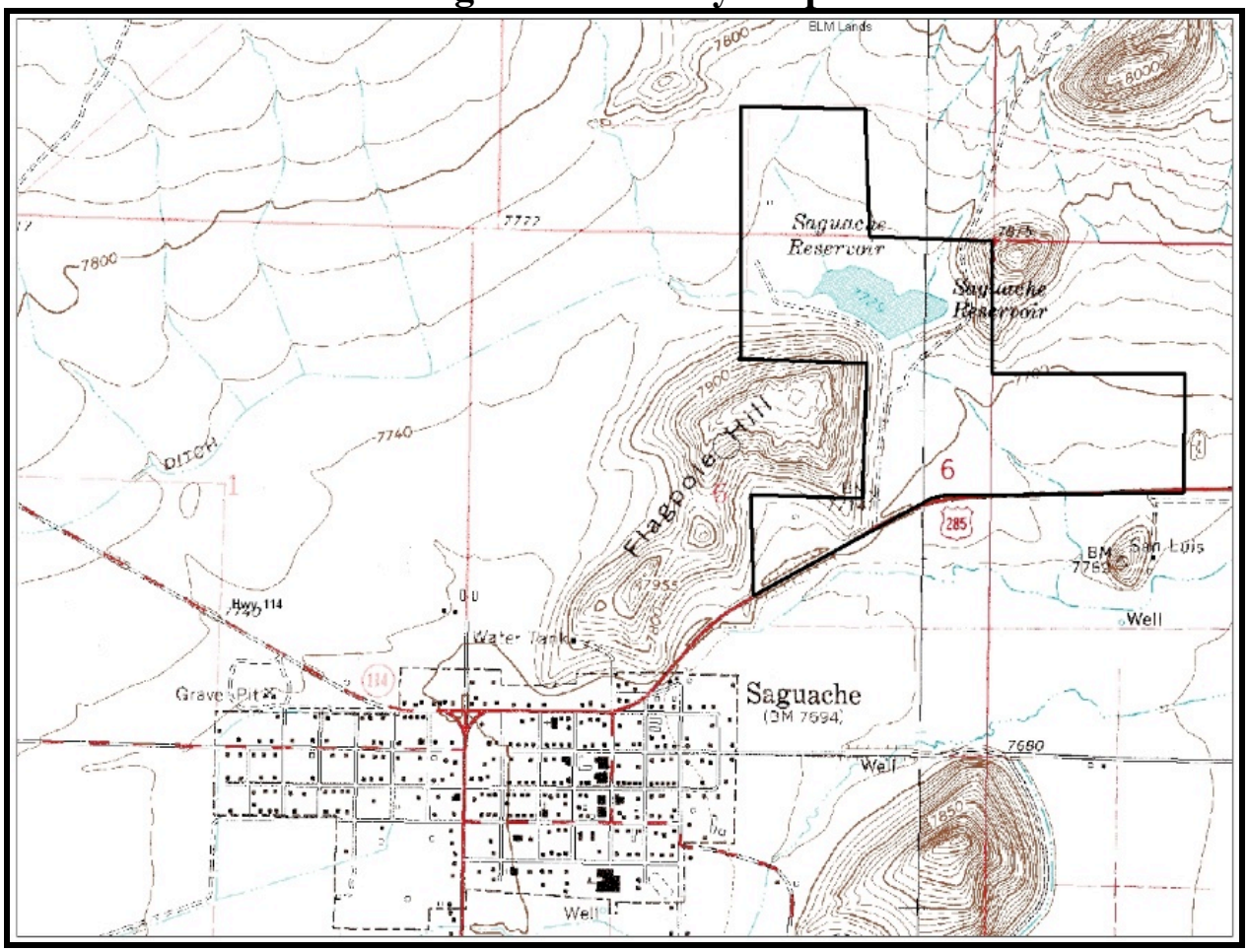
Executive Summary:

The Saguache Alliance for Green Energy (SAGE) is an ad hoc committee endorsed by the Town of Saguache's Planning Commission in 2009 to assist the town, and the county, in conserving energy and developing renewable energy technologies. Comprised of town citizens, business leaders, elected officials and other valley residents, SAGE is committed to the process of creating an environmentally sustainable community where its citizens can live, work and play.

This Strategic Energy Action Plan (SEAP) outlines the planning process, baseline documentation and action items that will be necessary for the town government to lower its energy usage, meet its twenty-percent reduction goals and become more energy independent. The plan is intended to be dynamic and should be updated yearly to reflect implemented energy conservation measures and assess their impact toward achieving the reduction goal. The SEAP should serve as a "road map" for Saguache citizens, business owners and elected officials in efforts to develop an infrastructure that values energy conservation and efficiency, energy reliability, reasonable and predictable energy costs, and the creation and use of clean, local energy sources.

Saguache Vicinity Map



Saguache is the gateway to the San Juan Mountains, home to the Rio Grande National Forest and the La Garita Wilderness Area. It sits at an elevation of 7800 feet, surrounded by the Sangre de Cristo mountain range on the east and the San Juan range on the west. Saguache is a Ute Indian name pronounced Sa-watch. It means "Water at the Blue Earth." It was settled in 1867 by Otto Mears who started his fortune with the first toll road above Poncha Pass. Ranching is the main occupation in this part of the Valley. Both cattle and sheep are raised, cattle being predominant.

Sheep ranching gradually gave way to cattle and alfalfa hay production. Local government has become the primary employer in town. Present day Saguache has one school, a library, a museum, four churches, two gas stations, one liquor store, two grocery stores, two restaurants, a sawmill, and an organic farm. Today, as in past times, Saguache is still a popular last stop for many travelers.

Background:

The Saguache Alliance for Green Energy (SAGE) ultimately resulted from the planning process for the Saguache Downtown Revitalization Project (SDRP), after energy efficiency and renewable energy goals and objectives were included in the SDRP Action Plan. Originally called the Saguache Ad Hoc Solar Committee, the committee, established by the Town's Planning Commission, began to meet and discuss how the town could meet the specific goals of the SDRP related to energy efficiency and renewable energy.

Goal # 3 of the SDRP Action Plan reads: **- "Create a model and mechanism to incorporate sustainability, energy efficiency, and renewable energy into the revitalization of Saguache".**

In addition the following objective was established: "**Provide energy programs that focus on 4th Street and are expandable to other areas in Saguache".**

The Town of Saguache approached Saguache County Sustainable Environment and Economic Development (ScSEED) to assist with the administrative functions of this group, recommending that ScSEED obtain an AmeriCorps/VISTA position through the Western Hardrock Watershed Team (WHWT). ScSEED applied for and received a Recovery VISTA volunteer (Devon Pollack) to work on this project, in partnership with the Town, for a one-year period (July 2009 through July 2010).

To develop the Saguache Energy Action Plan, SAGE received funding from the County Commissioners through a County Sales Tax Grant. SAGE hired the Colorado Harvesting Energy Network (CHEN) to develop the SEAP with the assistance and guidance of SAGE members. CHEN matched the county grant with additional funds from the Colorado Department of Agriculture – Advancing Colorado Renewable Energy (ACRE). SAGE's work has also been financially supported by the Governor's Energy office, the Odell Brewing Company - Fund of the Community Foundation, and the Western Hardrock Watershed Team.

Purpose:

The purpose of the Saguache Energy Action Plan (SEAP) is to transform Saguache into a community where energy is generated and used in the most sustainable manner possible. The SEAP is a community-based energy initiative, focusing on energy efficiency measures, local economic development opportunities and renewable energy. This plan establishes the starting point ("Baseline") from which the town can begin to implement energy saving targets to reduce overall energy consumption and cost. This plan implements Goal # 3 of the SDRP by creating a "model ("the SEAP") and mechanism (the action items") for the Town of Saguache to follow as it begins to lower their energy usage and corresponding costs. Ultimately, this plan should serve as a template for Saguache County, as well as the other communities in the San Luis Valley who seek ways to become more energy independent and economic sustainable.

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Mission of SAGE:

- ***Implement a Strategic Energy Action Plan (SEAP) for the Town of Saguache, to serve as a model for the County and other San Luis Valley communities by engaging town residents, public entities, and local businesses to pursue energy efficient and renewable energy measures, ultimately leading to a prosperous, productive, and sustainable community.***

Goal # 1- Energy Reduction:

Reduce the town's annual energy costs and utility consumption in a cost-effective manner by June 30, 2012.

- Objective # 1 – Reduce the annual energy cost and consumption for town's municipal facilities by 20%.

- Objective # 2 – Reduce the annual energy cost and consumption for the town's residents and business owners by10% .

- Objective # 3 - Lower the town's carbon footprint by: 1) stabilizing and ultimately reducing the town's expenditures on non-renewable energy resources and 2) pursuing renewable energy resources that are cost effective and dependable.

Action Items:

I. Complete the Saguache Energy Action Plan (SEAP)

II. Achieve Goal # 1 by implementing the energy efficiency and renewable energy action items identified under Goals # 3 & 4.

III. Work with the Town Planning Commission and Trustees to adopt a resolution to:

a. Reduce the annual energy cost and consumption for the Town's municipal facilities by twenty percent by June 30, 2012; and

b. Reduce the annual energy cost and consumption for Town residents and business owners by ten percent by June 30, 2014, and

c. Coordinate with Saguache County and other local jurisdictions to pursue implementation measures such as performance contracting, a property assessed clean energy program, and educational efforts; and

d. Support the Saguache Alliance for Green Energy (SAGE) serving as advisors to the Town regarding plan implementation and refinement; and

e. Pursue funding for plan implementation including the cost of an energy coordinator.

Goal # 2 - Public Education and Outreach :

Increase the town's (Trustees, business owners and residences) awareness of energy efficiency measures, renewable energy technologies and sustainability practices.

- Objective #1 - Provide information and guidance to the Town of Saguache's Planning Commission and Trustees.

- Objective # 2 –Create an outreach strategy to educate students, town residents and business owners about energy efficiency programs and renewable energy technologies.

- Objective # 3 - Assist Saguache County and Mountain Valley School District in understanding what options are available to serve their needs.

- Objective # 4 – Serve as a catalyst ("set an example") for all of the communities of the San Luis Valley to become more energy independent and sustainable.

- Objective # 5 – Promote the Governor's Energy Office (GEO) by serving as an information and technical resource. Promote GEO's programs throughout the community

Action Items:

I. Provide regular updates to the Town of Saguache's Planning Commission and Trustees on relevant matters related to the SEAP, energy efficiency and renewable energy opportunities and grants.

II. Attend public meetings to ensure opportunities are not missed.

III. Host workshops to inform Saguache's residents and business owners.

   a. 1st - January, 2010.

   b. 2nd – January 2011.

IV. Bring experts to the community to share their experiences about related topics.

   a. Trident Energy Services (EPC),

   b. Wayne Snider, Town Manager, Town of Fowler.

V. Seek grant funding opportunities.

VI. Initiate an education program for Saguache school children including installation of instruments to measure wind and solar characteristics. Seek opportunities to educate and inform Saguache County, and all of the other SLV communities.

VII. Develop a town survey to better understand the town's knowledge and interest in EE and RE technologies and programs. Survey completed.

VIII. Use and leverage the GEO Community Marketing Grant and the second Saguache County Sales Tax Grants to support the public outreach and education work.

   a. Received $3,000 from the Governors Energy Office – May, 2010

   b. Received $3,000 from Saguache County Board of County Commissioners., June 2010.

Goal # 3 - Energy Efficiency:

Advance energy efficiency (EE) measures throughout the town

- Objective # 1 – Help the Town of Saguache reach its energy efficiency and energy reduction targets by ensuring the Town Trustees, residents & business owners implement all reasonable energy efficiency measures.

- Objective # 2 - Secure funding and technical assistance through grants to install energy efficient measures.

Action Items:

I. Weatherization Programs:

   a. Enlist town residents eligible for low-income weatherization audits and assistance programs. Work with Veterans Green Jobs to enlist Saguache residents who are eligible and interested in this program

   b. Explore the feasibility of creating a residential weatherization program for town residents who do not qualify for low-income weatherization.

II. Property Assessed Clean Energy (PACE):

   a. Assist the town and county in gaining the necessary knowledge to determine if the PACE program could provide a realistic and feasible financing mechanism for energy efficiency and renewable energy improvements.

III. Environmental Performance Contracting (EPC):

   a. Assist the town in implementing Energy Performance Contracting (EPC). Actions taken:

      1. Arranged for John Canfield, Trident Energy Services, Inc to come to Saguache and make a presentation to the Town Board, School Board and County Commissioners.
      2. Assisted the town, county and school district in gaining all necessary information.
      3. Arranged for follow-up visit with County Commissioners (March 2, 2010)
      4. Encouraged town, county & school district to execute EPC Facility Owner's Memorandum of Understanding. 4/26/10 Status:
         a. Signed and submitted by Town Board
         b. Signed and submitted by Saguache Board of County Commissioners
         c. Signed and submitted by Mountain Valley Schooled Board
      5. Town, County and School District have signed MOU. Waiting for additional feedback from John Canfield as to next step. Next meeting scheduled for May 25, 2010.
      6. Town, County and School District providing updated energy consumption figures. Beginning RFP stage.

IV. Residential Audits and Rebates:

a. Look into Xcel rebates for residential audits and provide information sheets for interested parties (business owners & residents)

b. Explore opportunities for grants to advance energy efficiency measures throughout the town.

Goal # 4 - Renewable Energy:

Advance renewable energy (RE) technologies throughout the town.

- Objective # 1 - Document the best renewable energy opportunities that are practical for the town/ northern portion of the SLV. (solar, wind, hydro, geothermal).

- Objective # 2 - Prioritize the renewable energy opportunities that best fit the town's profile and needs.

- Objective # 3 - Develop partnerships and secure funding and technical assistance to install renewable energy technologies.

Action Items:

I. Prioritize which renewable energy programs and systems would work best for the town's profile and needs. Current considerations include:
   a. Individual photovoltaic (PV) system for residential and business applications.
   b. Individual photovoltaic (PV) system for the government buildings and facilities.
   c. Larger photovoltaic (PV) or Central Solar Power (CSP) system built on the town's landfill site.
   d. Larger photovoltaic (PV) or Central Solar Power (CSP) system built in conjunction with the Vista Grande/ GOCO planning project.
   e. Town ownership (i.e piggybacked) of a larger commercial scale photovoltaic system.
   f. Other RE systems (Bio, Geo, Hydro)

II. Pursue Xcel and GEO programs and grants to help implement these goals.

III. Support Saguache County in implementing a Property Assessed Clean Energy (PACE) program.

IV. Examine how a Solar Community Gardens (HB 1342) could be utilized to implement a shared photovoltaic project in town.

Goal # 5 - Financing:

Provide public and private financing options for residential, commercial and municipal users.

- Objective # 1 – Be proactive in tracking the various financing options available for energy efficiency and renewable energy systems, including but not limited to, Federal and State tax credits, rebates, property tax assessments, energy efficiency mortgages, grants, etc

- Create an information database to ensure the information is readily available.

- Objective # 3 - Disseminate the information through flyers, mailings, workshops and media

Action Items:

I. Solicit the assistance of public and private experts to develop an accurate proforma to:
   a. Document the true consumption and cost of the town's energy.
   b. Document the projected Xcel rate increases over the next 5- 20 years.
   c. Document the real saving to the town in developing a renewable energy project with a third party Power Purchase Agreement (PPA).
   d. Model the anticipated results of the transaction, with particular emphasis on the project costs, electrical rate savings, projected cash flows, net revenues, etc.

Baseline Assessment:

Town Facilities (2009 numbers):

Facility	Year Built	Square Footage	Kh Used	Thermal Used	Electricity Cost	Gas Cost	Total Energy Cost	Cost/Sq. Ft.
Town Hall & Shop	1914 2002	2,028 2,400	9,148 kh	4,372	$ 875.32	$3,344.75	$4,220.07	$ 0.95
Chlorine Building	1993	37	6,716 Kh		$ 656.33	N/A		
Community Building	1930	4,592	6,032 Kh	2,346	$ 620.88	$1,903.44	2,529.16	$0.55
Pump House # 1	1979	98	52,372 Kh		$ 10,905.85	N/A	$10,905.85	$111.28
Pump House # 2	1993	128	27,390 Kh		$ 6,455.97	N/A	$ 6,455.97	$50.20
Street Lights Water tower			42,088 Kh		$ 12,928.00	N/A		
School Flashers			99 Kh		$ 121.65	N/A		
TOTAL			143,845 Kh		$ 32,564.00			

Energy Accounting/ Overview:

With the assistance of SAGE, the town will track electricity and natural gas use to assess progress toward meeting the twenty-percent energy reduction goal. Electrical use and natural gas will be tracked yearly for each facility and compared against the previous year's energy use. Because yearly energy usage will vary depending on weather as well as changes in the size of a facility, SAGE will need to develop a tracking and management system that can adjust energy use figures to account for year to year weather differences. SAGE will update the size and use of the facility as changes occur. Energy use totals will be reported on a square foot basis to account for growth of a facility so that a meaningful comparison can be made between the 2009 baseline year and subsequent years.

For each of the facilities monitored, annual energy use is based on twelve months worth of bills. For ease of accounting, the end date of the bill is used to determine which calendar year the bill will be recorded in (i.e. a bill for December 15, 2008 - January 18, 2009 bill will be recorded as part of calendar year 2009 while a December 16, 2009 - January 20, 2010 bill would be recorded as part of calendar year 2010).

Baseline Energy Use
In order for the town to reduce energy costs and utility consumption, it will be necessary to complete a comprehensive energy analysis of all buildings and facilities that make up the system. This analysis will include individual energy audits for each building designed to identify places where the building's construction, insulation, glazing, electrical, heating and/or mechanical system could be upgraded and or replaced. The energy audits will identify places where energy efficiency measures can be made to improve the building's efficiency and ultimately lower energy costs and usage. As of this June, 2010, the town, county and school district have signed a Memorandum of Understanding to participate in the Energy Performance Contracting (EPC) program with the Governor's Energy Office. All of the Energy Service Companies (ESCO) that participate in the EPC Program have the technical expertise and personnel to complete comprehensive energy audits. Where economically feasible, the audit recommendations will include the installation of new renewable energy systems to upgrade or replace existing electrical and heating (thermal) sources.

In addition to the energy audits, the town will need to implement (acquire and utilize) a system to track and monitor energy usage. Currently, there are many software options to track energy (Energy Star's Portfolio Manager, Energy Tracking, Energy Watchdog, EnergyCap Software, etc). Having the selected ECSO assist Sage and the town in tracking and monitoring the community's progress in reaching their specified targets would be a wise decision.

Town Facilities
The Town of Saguache currently has six separate buildings/facilities that account for its energy usage. Although very small in physical size (less than 130 sq. ft.), the two pump houses are the town's highest users of electricity. The pump houses currently pump residential, commercial and municipal water for the town, and the entire pumping and distribution system is being evaluated for efficiencies. The energy accounting at the two pump houses needs to factor in the quantities of water pumped on an annual basis. Because energy use for the pump houses is highly dependent on annual precipitation and seasonal irrigation, the accounting methodology needs to factor in these types of variances by year. SAGE anticipates that the Energy Service Company hired by the town will be able to recommend an appropriate methodology for energy tracking at the pump houses.

Measuring Annual Energy Use
The industry has developed standards for calculating and comparing energy usage. Some of the more common indices include the Energy Index Rating (EIR) or Energy Performance Indicator (EPI). The EIR is a measure of the total energy consumed in a building per year standardized based on square footage of the heated/cooled space in the building, and is expressed in "British Thermal Units" (BTU's). The EPI will allow a town, county, schools district to compare the efficiency rating of their building against similar buildings and facilities nationwide.

To calculate the EIR, the consumption of electricity and natural gas usage are first converted to equivalent BTU consumption via the following formulas:

ELECTRICITY Usage [Total KWH /yr] x [3,413 BTUs/KWH] = _____ BTUs / yr

NATURAL GAS Usage [Total gal/yr] x [802 BTUs/CF] = _____ BTUs / yr

Then BTUs/Yr is divided by the square footage of the heated/cooled space in the building to obtain the EIR. Because of the varying types of operations, the EIR tool is not used to compare the town's facilities to each other but instead to see how a single facility varies from one year to the next in comparison to similar buildings and facilities nationwide.

Facilities Not Included

For ease in accounting, it is recommended that the program exclude minor facilities such as school flashers and water tower flashers that are not significant energy users. Street lighting is included, although the way energy use is recorded and billed is slightly different. The Town will investigate ways to further conserve energy, such as installing LED lighting, in all facilities.

Town Street Lights

Xcel owns the town's streetlights and does not permit the retrofitting of LEDs on its lights. In order for the town to retrofit the lights, the lights would have to be purchased from Xcel, which historically has been unwilling to sell at discounted rates. The price might have to be confirmed by an independent engineer and finalized in court.

If the town is interested in purchasing the lights, it will need to negotiate a fixed rate from Xcel. Without a fixed rate (substantially lower than our current rate!), the town would have to purchase and install a meter and cables to run from each light to the meter, which would be very expensive and take a long time to pay off. (Note: there has been some litigation in Denver against the PUC to make streetlight buyouts fairer by placing standard protocols for utility companies with municipalities seeking to buy streetlights. A PUC ruling is expected in early 2010).

If the town wishes to pursue other streetlight options such inductive and solar, it may be necessary to hire a streetlight consultant.

Resource Inventory:

Colorado's New Energy Economy:
Colorado is committed to bringing clean sources of electricity to the state through various innovative programs, public/private partnerships and government incentives. In support of Governor Ritter's New Energy Economy, The Governors Energy Office has been leading this effort and continues to be the primary source of information and funding. The majority of the federal stimulus dollars are coming from the American Reinvestment and Recovery Act (ARRA).

Many of Colorado's most promising green energy sources such as solar and wind power are located within the state's more rural areas. If Colorado is going to deliver these energy sources to the major consumer markets within the state and Rocky Mountain West, major improvements and investments will need to be made to the state's utility infrastructure. Intent on being proactive in addressing these challenges and opportunities, the State commissioned the *Task Force on Renewable Resource Generation Development Areas* to analyze and map the state's best energy resource areas. The report entitled Connecting Colorado's Renewable Resources to the Markets (SB07-91 Report*)*, can be found in its entirety on the Governor's Energy Office website, (www.rechargecolorado.com).

This report confirms that Colorado ranks number eleven in the nation for wind potential, fourth in the nation for solar potential and fourth among Western states for geothermal development site potential. The report identified eight Generation Development Areas (GDAs) for wind, and two GDAs for central solar power. The eight wind GDAs are located on the Front Range and Eastern Plains, and the two solar GDAs are located in the San Luis Valley and south and southeast of Pueblo. (Note: A GDA is a concentration of renewable resources within a specific geographic sub-region in Colorado that provides a minimum of 1 Gigawatt of developable electric generating capacity that could connect to a new or existing high voltage transmission line).

The report confirms that "many of the state's best energy resource zones are currently only served by lines rated at 115 kV, and these lines are only capable of delivering very modest blocks of power. Higher voltages lines, such as 230, 345, and 500kV lines are far more effective at delivering Colorado's rich renewable resources to the markets. Most of the high voltage transmission lines in or near the GDAs already are constrained, with little spare transfer capability to accommodate new renewable power development."

In addition to the SB07-91 Report, the state commissioned another study to specifically investigate the state's transmission and infrastructure limitations and capabilities. The Renewable Energy Development Infrastructure (REDI) Report provides valuable information regarding the overall reliability of our electrical system, the need for infrastructure upgrades, and strategic planning to minimize the economic and environmental costs into the future. According to the REDI Report, "Colorado is fortunate to have some of the most abundant utility-scale renewable resource generation development areas (GDAs) in the nation...however, to bring that power to the market requires high-voltage transmission infrastructure. Developing Colorado's resources as a means to mitigate climate change …offers an unprecedented opportunity for the state to lead the nation and take full advantage of the New Energy Economy. Leadership in

Colorado's electricity sector that successfully addresses the inter-related challenges, including pursuing a CO2 reduction strategy, will create new jobs, will revitalize many of our rural economies, and will help ensure long-term cost stability for electric customers."

Saguache and the San Luis Valley:

The San Luis Valley has been identified as having substantial solar potential (i.e. highest incidence of direct normal insolation of solar energy) and is identified as one of Colorado's best locations for the production and potential export of solar electricity. The National Renewable Energy Laboratory (NREL) conducted an analysis of the two GDAs, identified for central solar power (CSP). NREL estimated that Colorado's two combined solar GDAs could produce 26 Gigawatts (GW) of power if just 2% of the land area was developed with central solar power technologies. (Note: The NREL study did screen out the slightly lower direct normal insolation as well as the land area that has a terrain slope of more than 1%. NREL's also used an estimate of 6,733 – 7,333 kWh/m2/day Annual Direct Normal Insolation.) A Gigawatt is equal to one billion watts.

Portions of the northern San Luis Valley, including the Saguache area, possess some of Colorado's best solar energy resources. The area currently is served by three transmission lines coming from the north over Poncha Pass. Because the existing lines do not have the capacity to export additional electricity out of the valley, Public Service Company of Colorado (PSCo) and Tri-State Generation and Transmission have filed a joint application to build new transmission lines in the San Luis Valley to connect to the I-25 corridor. Whether or not the San Luis Valley-Calumet-Comanche line will ever be built is a subject beyond the scope of this plan. The other possibility is to increase the size and capacity of the transmission lines currently serving the valley from the north over Poncha Pass.

Summary:

Both reports mentioned above focus on utility-scale generation. Whether this desirable, or will occur in the future, will depend on the state legislature, improvements to the transmission and infrastructure grid, and on the receptivity and approval, of the local counties and communities. Community-based, renewable energy projects also can be designed and developed to serve the local needs of the community. Community-based energy development creates sustainable communities by stimulating job growth, increasing tax base and empowering local control. Distributed generation and storage of electricity can provide immediate system-wide benefits by taking advantage of the existing transmission infrastructure and by meeting the goals of Colorado's Climate Action Plan. The Town of Saguache can take advantage of the tremendous solar energy resources in the area by developing projects designed to benefit the local communities.

Town of Saguache
Resolution

Saguache Strategic Energy Action Plan

Draft
June 9, 2010

WHEREAS: Community leaders have demonstrated a commitment of time, talent and resources necessary to chart a path for the Town of Saguache and its residents to benefit from the New Energy Economy;

WHEREAS: The Governor's Energy Office provides a range of educational, financial, and technical resources for communities, residents and business owners;

WHEREAS: The Saguache Town Planning Commission formed an energy efficiency and renewable energy advisory committee that evolved into the Saguache Alliance for Green Energy (SAGE);

WHEREAS: Saguache County Sustainable Environment and Economic Development (ScSEED) received a grant from Saguache County and the Colorado Harvesting Energy Network to develop a Strategic Energy Action Plan (SEAP); and

WHEREAS: SAGE members have prepared a draft plan identifying action steps that residents, local government, and businesses should take to pursue cost effective energy efficiency and renewable energy measures;

NOW THEREFORE BE IT RESOLVED THAT

Trustees for the Town of Saguache hereby endorse the Saguache Strategic Energy Action Plan and adopt the following implementation objectives:

a. Reduce the annual energy cost and consumption for the Town's municipal facilities by twenty percent by June 30, 2012;

b. Reduce the annual energy cost and consumption for Town residents and business owners by ten percent by June 30, 2014,

c. Coordinate with Saguache County and other local jurisdictions when pursing implementation measures such as performance contracting, a property assessed clean energy program, and educational efforts; and

d. The Saguache Alliance for Green Energy (SAGE) shall serve as advisors to the Town regarding plan implementation and refinement; and

e. Secure funding for plan implementation including the cost of an energy coordinator.

APPENDICES:

Energy Performance Contracting (EPC)
Information Sheet

Process through which energy efficiency and capital improvements are funded (fully or partially) by the energy and maintenance cost savings generated by the improvements themselves when the cost savings are financed over a period of time. It is a way for the Town, County and School District to upgrade their facilities without dipping into their capital budgets. The program basically uses future energy and maintenance savings to pay for projects.

Highlights of program include:

•Financed through lease-purchase agreement (typical)

•Funds from multiple sources may be combined.

•Guaranteed cost savings pay lease-purchase

•Annual cost savings meet or exceed annual payments

•Up to 25-year term depending on equipment lifetime

•Not impacted by TABOR (annually renewable & subject to non-appropriations)

•Endorsed (strongly encouraged) by state legislature & Governor

•Additional funding sources can supplement energy and maintenance cost savings.

- •Utility Incentives
- •DOLA Grants
- •GEO/ARRA Grants
- •Main Street Energy Initiative
- •Capital Fund

Property Assessed Clean Energy (PACE)
Information Sheet

PACE is a national financing program for energy efficiency and renewable energy measures for residential and commercial buildings**. The program is voluntary**! Residents and business owners opt in as desired. PACE was first introduced to Berkley in 2008. In 2009, Boulder county setup their Climate Smart Program which includes a PACE loan program. In 2010, Pitkin, Eagle, and Gunnison county set up a tri-county PACE program, Energy Smart Loan.

PACE is a bond initiative. Communities wishing to set up a PACE program must succeed in placing and passing a resolution on the county ballot. Once it passes, the county sets up a land-secured financing district to sell bonds and use proceeds to make PACE loans. Property owners voluntarily signup for financing to install energy projects. Up to the full upfront cost of improvements is loaned. Property owners repay bond through property tax bill (up to 20 years)**- This is not a tax!** The loan becomes attached to the property and repaid via the property tax. If a homeowner sells a home the repayment transfers to the new owner. The interest rate varies with programs, but is generally a fixed low rate. (Boulder's Climate Smart Program operates around a 6% IR.)

PACE can help meet clean energy and climate goals, save residents money on utilities, and promote local jobs! PACE is tax neutral.

Actions taken:

In March, 2010, SAGE members participated in a discussion with the Saguache County Commissioners. The Commissioners were aware of the program and expressed an interest in additional information regarding the fiscal impacts to small counties to administer such programs.

GEO Low- Income Weatherization Program Information Sheet

The Governor's energy Office (GEO) Weatherization program partners with local weatherization agencies throughout the state. The SLV weatherization partner is Veterans Green Jobs located in Alamosa. The Weatherization agencies provide **FREE** weatherization services to low-income Colorado residents. Weatherization is the installation of measures that improve the level of energy efficiency in a building. Average participant in the SLV receives around $4,000 of services. Services include insulation in attics and walls, furnace replacement, furnace safety testing, refrigerator replacement, sealing air leaks, compact fluorescent light bulbs (CFL) replacements, energy audit, storm windows and doors, and energy conservation information. All of these services are aimed to reduce the amount of energy you consume and significantly reduce your utility bills. Participants of this program gain comfort and save money!

Qualification guidelines are:

Residents currently receiving financial assistance from any of the following programs are automatically qualified:

*Temporary Assistance for Needy Families (TANF)
*Aid to the Needy and Disabled (AND)
*Old Age Pension (OAP)
*Supplemental Security Income (SSI)
*MEDICAID
*Low Income Energy Assistance Program (LEAP)

Households can also be eligible if they meet income guidelines below:

Household members	Gross * Monthly Household income	Gross* Annual Household income
1	$1,805.00	$21,660.00
2	$2,428.33	$29,140.00
3	$3,051.67	$36,620.00
4	$3,675.00	$44,100.00

***Please note that any home that previously received free weatherization services from the government program (even if resided by different owners) is not eligible to receive services again until ten years has exceeded the service date.

Applications are available at the Saguache Town Hall, Americorp VISTA desk (719) 655-2237 and the Veterans Green Jobs Office in Alamosa 1825 State Avenue, #24 81101 (719) 587-9492

Community Solar Gardens
Information Sheet

A community solar garden refers to clusters of hosted panels shared by a group of people. Solar gardens allow people to participate financially in owning part of a solar array even if they do not have a suitable site on their own property. A Solar Gardens initiative is currently under Colorado legislation (HB 1342) that allows residents to purchase solar panels and have them installed on town facilities. Colorado's solar gardens can have as few as ten subscribers, or as many as hundreds. If the bill passes, rule making will begin in October, and solar gardens can be built in 2011.

A Community Solar garden project would allow a group of residents/business owners in a neighborhood (town) to pool their resources to cover the upfront capital cost of a renewable energy installation. Each member who purchases an equity stake in the installation is entitled to the benefits from the co-op; including the tax credits, renewable energy credits and the production purchased by Xcel.

On May 4, 2010, signed "community solar garden" legislation (HB10-1342) into law. The law is only applicable to investor-owned utilities. Some of the bill's provisions include:

- Solar gardens must accommodate 10 or more subscribers (Excel customers).
- A solar garden project cannot produce more than 120 percent or the average annual load by its subscribers.
- The solar system cannot be larger than 2 megawatts, and the utility does no have to purchase power from more than 6 megawatts of solar gardens per year for the first three years of the program.
- During the first two years, 3 megawatts of that power must come from smaller solar gardens that have a capacity of 500 kilowatts or less.
- Subscribers must live in the same county where the solar garden is built, unless the county has a population of fewer than 20,000 people. If subscribers move to another address in the same county, they can transfer their subscription to their new address.
- The electricity generated by a subscriber's share of a solar garden will be credited to the subscriber's electricity bill.

Several states now have laws supporting solar gardens including Washington, Maine, Vermont, and Massachusetts. Solar Gardens allows renters and residents of shady homes to capture the benefits of solar energy without having to install the system on their personal property. Subscribers of a community solar gardens project will be eligible to receive net metering credits and utility rebates.