

Appalachian Regional Commission Community-Based Energy Projects: Planning and Implementation

Alderson Community Energy Plan—Final Plan (as adopted)

Grant period: January 1, 2011 to June 30, 2012

Plan adoption: May 10, 2012

Project Title: Community-Based Approach to Implementing Locally-Owned, Distributed Renewable Energy and Energy Efficiency Strategies For Alderson, West Virginia and the Surrounding Greenbrier Valley Area

Contract No.: CO-16852

Grantee: Town of Alderson, West Virginia and Downstream Strategies, LLC

Primary Contact: Margaret Hambrick

Address: P.O. Box 179, Alderson, WV 24910

Email: mchwv44@gmail.com

Website: www.aldersonwv.org

Phone: (304) 445-2916

Fax: (304) 445-7248



Downstream Strategies
building capacity for sustainability



THE ALDERSON COMMUNITY ENERGY PLAN

This document serves as the Alderson Community Energy Plan (CEP). The CEP was developed as part of an energy planning project funded by the Appalachian Regional Commission, with contributions from private foundations and local stakeholders. The CEP is based on the goals identified at the onset and throughout the course of the project, and is consistent with the commitments outlined in the resolution passed by the Town Council on July 8, 2010. Specifically, the Town resolution, as it relates to energy, committed Alderson to (1) incorporating renewable energy and energy efficiency into the renovation of all public buildings, (2) developing principles of conservation that will be implemented in all public buildings, and (3) presenting the town of Alderson as a hub for small-scale sustainable energy and economic development projects.

Adopting and implementing this CEP will ensure that Alderson meets its commitments, and further, takes the necessary steps toward realizing its greater vision of becoming “the greenest small town in West Virginia.” This CEP describes short- and long-term commitments as well as the programs and actions the Town will implement in order to move toward achieving its energy goals and overall vision. The Alderson Green Team will help the Town implement all aspects of the CEP and, where appropriate, assume a leadership role.

Alderson’s ability to implement the CEP may be limited without new funding sources and/or financing opportunities. The Town’s limited fiscal capacity and the fact that the Appalachian Regional Commission is not offering implementation funding at the present time leaves Alderson with a lack of funding and financing for the implementation of energy projects. This may prove to be a limiting factor in the pursuit of the Town’s energy goals over the short-term. However, Alderson commits to exploring and pursuing public and private funds and low- to no-cost financing opportunities for implementing energy efficiency and renewable energy into the Town’s strategic development plans.

Elements of a community energy plan

The energy plan described herein helps Alderson achieve the nine general steps in local energy planning identified by the American Council for an Energy Efficient Economy (ACEEE).¹ These steps include:

1. identifying and convening local stakeholders;
2. forming a leadership team;
3. developing an energy vision;
4. developing an energy baseline;
5. developing specific energy goals;
6. evaluating and ranking implementation actions;
7. identifying or developing a funding source or sources;
8. compiling and adopting the plan; and
9. monitoring, verification, and periodic revision of the plan.

Alderson’s energy plan goes beyond the general structure of a CEP to include non-energy related or indirectly related goals and action items such as expanding Alderson’s recycling program. Additionally, the CEP expands the focus of the Town’s efforts and commitments to include not only publicly-owned buildings but also local businesses and residents. In this sense, Alderson’s CEP represents a broader plan for sustainability and greater community involvement and benefit than a typical CEP. Each element of the CEP is necessary for realizing Alderson’s overarching vision.

¹ American Council for an Energy Efficient Economy (ACEEE). 2012. Local energy planning in practice: A review of recent experiences. Mar 26. <http://www.aceee.org/research-report/e123>

Alderson's energy goals

The commitments Alderson made in the 2010 resolution can only be achieved by setting specific targets and timelines that direct the Town's energy investments. **To that end, the Town of Alderson commits to an overarching energy goal of reducing its electricity consumption by 10% through efficiency measures and conservation, and to generating 5% of its electricity from renewable energy sources by 2022, as compared to a 2011/2012 baseline.**

Achieving the efficiency targets alone will require a substantial focus on improving the energy efficiency of the water and sewer plants, while realizing smaller reductions for all other public buildings. Recognizing that achieving the targets will require significant capital expenditures, the greatest progress is likely to occur after the first five years. Therefore, as shown in the table below, the annual target for energy reductions will start small and progressively increase every three years, while targets for renewable energy are greater during the second half of the implementation period. The 2011/2012 baseline represents a rough estimate based on recent utility bills and will be refined by the Town.

Energy efficiency and renewable energy targets for the Town of Alderson, 2012-2022

Year	Electricity consumption (MWh)	Efficiency target (below 2012)	Annual reduction (below previous year)	Annual savings	Renewable energy target
2012	1,300				
2013	1,294	0.5%	0.5%	\$567	
2014	1,287	1.0%	0.5%	\$1,164	
2015	1,281	1.5%	0.5%	\$1,794	1.0%
2016	1,274	2.0%	1.0%	\$2,458	
2017	1,262	3.0%	1.0%	\$3,781	2.0%
2018	1,249	3.9%	1.0%	\$5,169	
2019	1,230	5.4%	1.5%	\$7,274	3.0%
2020	1,212	6.8%	1.5%	\$9,470	
2021	1,194	8.2%	1.5%	\$11,760	4.0%
2022	1,170	10.0%	2.0%	\$14,828	5.0%
10-year savings	550			\$58,264	

Note: "MWh" denotes "megawatt-hours," and each MWh represents 1,000 kilowatt-hours (kWh). This is notable since Town electricity bills report consumption in kWh.

Overall, initial estimates show that Alderson would save a total of nearly \$60,000 over the ten-year implementation period, for an average annual savings of \$6,000. Additional savings would be realized over the long term from renewable energy generation. These estimates do not account for the costs associated with implementing the energy efficiency improvements or installing renewable energy systems.

This document provides an implementation plan and timeline for each of the described action items. The Town commits to further exploring, developing, and incorporating each of the items described in the plan as resources and funding permit, and will determine which items to prioritize over the short term.

Action items for implementing the Alderson Community Energy Plan

Implementing the action items described below will move Alderson toward achieving its energy goals. These action items also include other non-energy items and programs identified as being consistent with realizing the Town's overall vision. The Green Team will help the Town implement all aspects of the CEP and, where appropriate, assume a leadership role.

1. **Refine energy goals and develop a plan for achieving them.** The Town's preliminary energy goals are described in Section 0. However, the annual and overall goals may need to be revised based on a more accurate analysis of monthly consumption, an identification of building-specific opportunities for efficiency improvements, and an assessment of available renewable energy resources. Therefore, the first step is to develop a more comprehensive baseline of energy consumption and expenditures for the Town as a whole and for each individual building. Using this information, the Town will refine its initial energy targets and assess opportunities for improvements for each public building. From here, the Town will develop a more detailed and prioritized plan for energy efficiency and renewable energy that achieves its energy targets. The Town will also set project-specific timelines. Throughout the course of implementation, the Town will monitor its progress and verify the success of projects in meeting the energy targets. Each of these steps is detailed below.
 - a. *Develop a more comprehensive baseline.* Relying primarily on electric utility bills, the Town will conduct a preliminary audit of monthly and annual electricity consumption for each of the Town's public buildings. A comprehensive audit will help establish a baseline from which to set more specific targets for reducing energy consumption, and will identify the sources of greatest consumption for each building. This information will help identify and prioritize projects for implementation. For instance, a basic review of 12 months of electricity bills showed that Alderson spent more than \$100,000 on electricity in a single year—representing approximately 80% of the Town's total utility expenses. Of this, nearly 60% of Alderson's total utility expenses went toward powering the Town's water and sewer plants, providing a first-level indication of where the Town should focus its efforts.
 - b. *Adopt detailed energy targets and refine the overall energy goals.* Based on the audit results and associated information, Alderson will refine the short- and long-term energy targets. Targets will be set for reducing energy consumption and for generating electricity from renewable energy sources at specific locations. A timeline will be set for achieving each target and completing the identified projects. The targets will be set so as to keep the Town on pace to achieve its long-term energy goals. Additional information will be gathered through building-specific energy audits and renewable energy feasibility studies.
 - c. *Develop a more detailed plan and set timelines.* The CEP details various action items to be implemented over the short term that will move Alderson toward the achievement of its goals, and it sets a timeline for implementing each item. However, using the information gathered from the baseline assessment and detailed audits of Alderson's public buildings, the Town will develop a more detailed plan for achieving its energy targets. This more detailed plan will include additional and longer-term action items and timelines beyond those provided in the original CEP, and will analyze existing opportunities for energy reductions and renewable energy production in order to prioritize projects and locations where the most cost-effective solutions can be implemented. The building-specific targets will be set according to a number of factors, including energy intensity, consumption patterns, and the availability of opportunities for energy reductions and renewable energy installations, among others.

- d. *Track and monitor progress.* To ensure the continued progress toward achieving the Town's energy efficiency goals, as well as the effectiveness of any actions taken, the Town will track energy consumption on a facility-by-facility basis and monitor trends in energy consumption using the EnergyStar *Energy Program Assessment Matrix* (unless a more suitable tool is identified). The *Assessment Matrix* is a free downloadable spreadsheet tool that can be used to track energy consumption for multiple facilities on a monthly and annual basis. It can also be used to set and monitor goals for energy reductions for each facility and/or for a group of facilities as compared to a determined baseline. Energy consumption data for use in the tool will be collected from facility utility bills.

The *Assessment Matrix* tool cannot be used to track renewable energy production; therefore, direct measurements of renewable energy produced will be added to the monthly data from utility bills to calculate total energy consumption. Dividing the renewable energy generation by the total will provide a percent of total energy consumption provided by renewable resources. This will be tracked in a separate spreadsheet and also monitored on a monthly and annual basis.

These processes will allow the Town of Alderson to verify the effectiveness of implemented projects in achieving the targeted energy reductions or renewable energy generation. It will also allow the Town to measure its progress over time toward achieving its overall energy goals. Summary reports of the implementation actions taken and the measured energy reductions will be provided to the Town Council on a quarterly basis. The Town will also convene an annual meeting to discuss the progress, identify any shortcomings, and, as necessary, adopt concrete measures for making up any shortfalls.

2. **Formalize and incorporate energy conservation practices into the operation, maintenance, and improvement of all public buildings.** The Town of Alderson recognizes that energy conservation is the easiest and cheapest way to reduce energy consumption and save on energy costs. In the 2010 resolution, it committed to "Developing principles of conservation that will be implemented in all public buildings and developing educational materials that will be distributed to the public." To this end, the Town commits to adopting energy conservation practices that will govern the use of energy in all public buildings and by all Town employees. The aim of the practices is to conserve energy and resources while saving the Town money as a result of reduced energy consumption. A secondary goal is to foster a spirit of conservation for the benefit of the community and the environment. The practices outlined below will be adopted as standard practice for all employees working in, operating, managing, or servicing public buildings in Alderson. The practices will be posted in every building, and a formal training session will be conducted to inform and educate public employees on the importance and implementation of the practices. Each employee will also be asked to sign an "Energy Conservation Pledge," which will be developed by the Alderson Green Team.

The energy conservation practices are as follows, categorized by energy use.

- a. *To conserve electricity for lighting, the Town government and/or all public employees will:*
 - i. Turn off all lights, equipment, appliances, and machinery when not in use. To reinforce this practice, the Town will place signage adjacent to all light switches as a reminder. This Practice will be supplemented by the installation of occupancy sensors in all rooms within every public building and the purchase and use of power strips where none exist, as resources and funding permit but in accordance with the achievement of the energy goals. The Town will adopt this practice more formally through the adoption of a Sustainable Procurement Policy, as detailed in the next section.

- ii. Replace all lighting in public buildings with more efficient fluorescent lighting and fixtures, as resources permit but in accordance with the achievement of the energy goals. The Town will adopt this Practice more formally through the adoption of a Sustainable Procurement Policy, as detailed in the next section.
- b. *To conserve electricity used for space cooling and heating, the Town government and/or all public employees will:*
 - i. Use caulking and weather stripping around doors and windows to reduce losses of conditioned or heated air.
 - ii. Install insulation where it is lacking or insufficient for preventing substantial losses or infiltration of heat through walls and ceilings. This will be done as resources permit but in accordance with the achievement of the energy goals.
 - iii. Set summer cooling temperatures to a daytime temperature of 75 degrees, and winter heating temperatures to a nighttime temperature of 55 degrees and a daytime temperature of 68 degrees (the ideal temperature setting in the summer is 78 degrees). To reinforce this practice, the Town will place signage adjacent to all thermostats reminding occupants to maintain the recommended settings.
 - iv. Replace all non-programmable thermostats with programmable thermostats, as resources permit but in accordance with the achievement of the energy goals. The Town will adopt this Practice more formally through the adoption of the Sustainable Procurement Policy detailed in the next section.
 - v. Change air conditioner and heating unit filters regularly to ensure unrestricted air flow and to minimize the energy required to achieve a set room temperature.
 - vi. Insulate exposed air conditioner and heating ducts in the attic or in other areas.
- c. *To conserve electricity (or gas) used for heating water, the Town government and all public employees will:*
 - i. Insulate all water heaters and associated piping (avoid blocking the pilot light access door and air flow on gas heaters).
 - ii. Identify and fix all water leaks from hot water tanks and faucets.
 - iii. Lower the temperature on all water heaters to 120 degrees. To reinforce this practice, the Town will place instructive signage adjacent to all water heaters.

To aid in the implementation of the Practices, the Town will organize basic conservation and energy efficiency trainings for all public employees every two years. The trainings will be required for all public employees while also being open to the public. The trainings will be developed with the support of certified professionals; consultants; local, regional, and statewide companies; utilities; agencies; and/or non-profit organizations.

3. **Develop and implement a Sustainable Procurement Policy.** To minimize the negative health and environmental impacts of its operations, the Town of Alderson commits to adopting and implementing a procurement policy that ensures that the products and services the Town purchases embody a commitment to sustainability. The process will begin with conducting an audit of the Town's purchases to determine a consumption baseline and identify opportunities for enhancing procurement sustainability. A summary of targeted requirements and items are provided below, by issue area. As of the writing of this report, Alderson's Sustainable Procurement Policy is under development and will be incorporated into the current purchasing order form.

- a. Energy: The Policy requires the purchase of energy-efficient fluorescent lighting and light fixtures—both for the replacement of incandescent lighting and less efficient fluorescent lighting—whenever any lighting requires replacement, or as funding permits. The Town will also purchase and install energy efficiency items such as programmable thermostats, occupancy sensors for controlling lighting, and power strips for turning off all machines and appliances at the end of the work day. As higher value items require replacement, such as Heating, Ventilation and Air Conditioning (HVAC) systems and water heaters, the Town will purchase the most cost-effective yet energy efficient equipment available. Any new items purchased will be ENERGY STAR certified.
- b. Waste and toxicity: The Policy requires the purchase of materials and products that, to the greatest extent possible, are recyclable or reusable, biodegradable, non-resource intensive, non-toxic or of comparatively low toxicity, and/or certified as environmentally friendly or energy efficient. Applicable materials include, but are not limited to, any office and non-office materials used by public officials and employees such as equipment, mechanical items, paper, stationary, presentation materials, kitchen items, and cleaning agents.
- c. Water: The Policy requires the purchase of low-flow faucets and faucet aerators to replace and improve existing faucets as needed. The faucets/aerators for smaller sinks will have flow rates of no more than 1.0 gallon per minute. As any dishwashers or clothes washers require replacement, the new units purchased will be ENERGY STAR certified.
- d. Social impact: In order to maximize the local economic impact and minimize the environmental impact of purchases, the Policy requires that as many items as possible be purchased from local and regional retailers. First preference for the procurement of goods or services will be given to businesses located in the Town of Alderson.

All public employees making Town procurement decisions are required to comply with the Policy to the maximum extent possible, yet within the Town's fiscal means. The Town will organize and require participation in procurement trainings for all public employees every two years. Additionally, to aid in the implementation of the Policy, the Town will require an annual report detailing the Town's purchases and their adherence to the Policy. The Town Council will use the annual reports to inform reviews of the Policy every second year and assess implementation and needs or opportunities for strengthening the Policy.

4. **Incorporate renewable energy and energy efficiency into plans for renovating or upgrading all public buildings, and assist local stakeholders in accessing available energy opportunities.** The Town commits to incorporating energy efficiency improvements and renewable energy installations into future renovations or improvements to all existing public buildings, as well as the construction of all new public buildings. In addition, the Town will strive to assist local residents and businesses in reducing their own energy consumption while gaining access to renewable energy.

Toward the achievement of these goals, the Town of Alderson will:

- a. Conduct or contract for assessments of renewable energy development opportunities in and around Alderson that could contribute to Alderson's renewable energy targets, as resources permit, including solar PV and solar hot water, small wind, small and low-power hydroelectric, and biomass.
- b. Promote energy assessments or audits for all interested local businesses—to be conducted by West Virginia University's (WVU's) Industrial Assessment Center (IAC) or Manufacturing Extension Partnership (MEP)—by distributing program brochures at various public locations. Numerous assessments have already been conducted (see Attachments). For low-income residents, the Town will distribute information on the state Weatherization Program.

- c. Assist local businesses in accessing financing and incentives to implement energy efficiency improvements. The Town will work to connect local businesses to grant and loan opportunities through the United States Department of Agriculture's (USDA's) Renewable Energy for America Program as well as local financial institutions. In addition, the Town will distribute information on existing state and federal financial incentives as well as utility energy programs that support renewables and efficiency, and publicize information on new grant opportunities available to local businesses as they become available. These opportunities will be posted on the Town website and published in the local newspaper.
- d. Connect interested residents and businesses to local renewable energy installers. This will be achieved through the organization of periodic public energy forums and other community events such as the Alderson Family Energy Fair. Information on available companies will also be distributed on behalf of the installers at public locations.
- e. Organize public events and trainings on energy efficiency, renewable energy, project cost and implementation, and general concepts of sustainability.
- f. As funding permits, hire or appoint an Energy Coordinator to organize and manage each of the CEP action items the Town is responsible for. The Energy Coordinator may be the same person as the Town Council member assigned to the Alderson Green Team (see item 5).

To reiterate, regarding project implementation, Alderson's limited fiscal capacity and lack of implementation funding at the present time leaves Alderson with a lack of funding and financing for the implementation of energy projects. This may prove to be a limiting factor in the pursuit of the Town's energy goals over the short term. However, Alderson commits to pursuing public and private funds and low- to no-cost financing opportunities for implementing energy efficiency and renewable energy into the Town's strategic development plans. Options include:

- a. Continuing to pursue an energy savings performance contract for the Town with Energy Systems Group (ESG) or another ESCO, perhaps even as part of a larger county-wide project.
 - b. Exploring the Town's options for state and federal grants or financing programs, including through the West Virginia Division of Energy, West Virginia Development Office, US Environmental Protection Agency, USDA, and US Department of Energy.
 - c. Pursuing private funding opportunities from local, state, regional, and national foundations, including the Claude Worthington Benedum Foundation and Energy Foundation, among others.
 - d. Continuing efforts in working with local and regional financial institutions to obtain low-interest loans that may be used to finance efficiency upgrades and renewable energy installations.
 - e. Continuing to explore the feasibility of developing and/or utilizing unique financing options for renewable energy development, including third-party financing and power purchase agreements, public benefits charges, and Property Assessed Clean Energy financing programs, among others.
5. **Support and sustain the Alderson Green Team, and enhance the partnership between the Green Team and the Alderson town government.** The Green Team has served as the primary vehicle for the development of the CEP and had great success during the project period in developing community-based programs consistent with the overall goals of the CEP. However, greater involvement by Town government representatives is critical for supporting the efforts of the Green Team. Moving forward, the Town Council will play a larger role in participating in and supporting the Green Team and its activities. The Green Team will help the Town implement all aspects of the CEP and, where appropriate, assume a leadership role.

The Town Council commits to:

- a. Pass a resolution/adopt an ordinance formalizing the partnership between the Town and the Green Team that describes general roles and responsibilities of the Town in supporting and implementing the CEP. The partnership will also be formalized through an official partnership agreement.
- b. Appoint a Council member as liaison for local, regional, state, and national energy groups or governmental agencies and as representative to the Green Team to attend all meetings, represent the Council at Green Team events, and report to the Council each month on Green Team activities and needs. The Council member will also network with local residents and businesses, county and state government agencies, other local governments, private foundations, financial institutions, utility companies, and non-profit organizations, among others, in order to explore additional opportunities for energy-related program development, collaboration, or project funding.
- c. Work with the Green Team to explore new ordinances, policies, and programs that the Town could adopt to advance the goals of the CEP and the Green Team, including but not limited to developing a ride-share program, passing a local green buildings ordinance, and/or recommending conservation-oriented curricula to be developed at Alderson Elementary.
- d. Assist in organizing community educational and outreach events, programs, and trainings.
- e. Assist in developing informational materials pertaining to the CEP and Green Team activities as well as conducting media outreach.
- f. Take primary responsibility in implementing items 1 through 3 of the CEP.

The Alderson Green Team will:

- a. Support the Town government in planning, obtaining financing for, and implementing new projects related to energy efficiency, conservation, and renewable energy.
- b. Take the lead in organizing and developing new small-scale community-based projects that achieve the goals of the CEP while enhancing community awareness and involvement.
- c. Assist in organizing community educational and outreach events, programs, and trainings.
- d. Assist in developing informational materials pertaining to the CEP and Green Team activities as well as conducting media outreach.
- e. Participate in networking with local residents and businesses, county and state government agencies, other local governments, private foundations, financial institutions, utility companies, and non-profit organizations, among others, in order to explore additional opportunities for program development, collaboration, or project funding for both Town implementation efforts and Green Team activities.
- f. Improve the substance and timing of meetings as well as avenues of communication with local residents, businesses, and the Town Council.

Collaborative activities of the Town Council and the Alderson Green Team will include:

- a. *Applying to Bridgemont Sustainability Institute's "West Virginia Sustainable Communities" (WVSC) program.* Over the project period, the Green Team held numerous meetings with the WVSC program to discuss the possibility of becoming a member community. As part of the CEP, the Green Team, representing Alderson, has decided to pursue membership in the program. The program will help further refine our short- and long-term energy goals and provide resources for supporting the Town's ability to realize its vision of becoming "the greenest small town in West Virginia."

- b. *Developing new small-scale, community-based projects.* Through the Green Team, the Town has made great strides in laying the groundwork for a sustainable Alderson by developing projects and organizing events that have been envisioned, developed, and led by community volunteers. These include: developing the first-ever recycling program for the Town, creating a green team at Alderson Elementary that explores themes of sustainability through various activities, and organizing events that enhance community awareness of sustainability. New projects may include working with the Alderson Ministerial Association to provide weatherization education, assistance, and materials to low-income residents in the area and exploring the concept of developing a community-owned solar system.
 - c. *Continue and expand outreach and dissemination.* Interest in energy planning has grown both within the Alderson community and in nearby towns such as Ronceverte. Together, the Green Team and the Town Council will organize presentations to share our energy plan to stakeholders across the Greenbrier Valley, assist other towns in taking steps toward developing their own energy plan, strive to make the Alderson Family Energy Fair an annual event, and continue to develop useful tools and resources and expand outreach and educational efforts within the Town of Alderson. By doing so, Alderson will benefit from the increased exposure of its efforts while advertising Alderson as a leader in sustainable economic development for small towns.
6. **Expand Alderson’s recycling program and incorporate recycling standards into government operations.** With the help of private funding and the donation of a recycling container from the Greenbrier County Solid Waste Authority (GCSWA), Alderson started its first-ever recycling program in July 2011. Currently, there is little funding to expand the program, and the maintenance and transportation of the container and materials is being conducted by volunteers. To expand the Town’s recycling program, Alderson commits to pursue long-term funding from the West Virginia Department of Environmental Protection’s (WVDEP’s) Recycling Program Assistance Grant and other sources in order to achieve the following:
- a. expanding and maintaining the Town’s recycling capacity, including adding curbside recycling for all residents and businesses and adding permanent recycling containers throughout the Town;
 - b. hiring a part-time employee to sort and transport the recycled materials; and
 - c. expanding outreach and educational efforts to advertise the benefits of recycling and the products that can be recycled.

In addition to expanding the Town program, the Town will require that all public employees reduce or eliminate unnecessary waste generated by administrative and other activities, such as unnecessary incoming and outgoing mail. The Town will also require that all employees reduce individual and office consumption of basic office materials and reuse certain materials such as paper. The Town will establish recycling points convenient for public employees and ensure that all collected recyclable materials are transported to and deposited into the Town recycling containers.

A timeline for implementing the CEP is provided on the following pages.

Timeline for implementation of energy targets and action items

Energy targets	2012			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	July	September	December										
Energy efficiency target (percent energy reduction below 2012)	--	--	--	0.5%	1.0%	1.5%	2.0%	3.0%	3.9%	5.4%	6.8%	8.2%	10.0%
Annual efficiency target (energy reduction below previous year)	--	--	--	0.5%	0.5%	0.5%	1.0%	1.0%	1.0%	1.5%	1.5%	1.5%	2.0%
Renewable energy target (percent of previous year electricity demand)	--	--	--	--	--	1.0%	--	2.0%	--	3.0%	--	4.0%	5.0%

Action items	2012			2013	2014	2015	2016	2018	2020	2022
	July	September	December							
Refine energy goals and develop implementation plan										
Develop comprehensive energy baseline										
Adopt detailed energy targets for buildings										
Refine overall energy goals										
Identify and prioritize energy projects										
Develop detailed implementation plan and set timelines										
Formalize and incorporate Energy Conservation Practices										
Develop Energy Conservation Practices for employees										
All public employees sign Energy Conservation Pledge										
Post Energy Conservation Practices and Pledge in all public buildings										
Place signage next to switches/equipment										
Organize basic conservation and efficiency training(s)										
Identify/implement affordable short-term lighting and equipment upgrades and weatherization improvements										
Develop and implement a Sustainable Procurement Policy										
Conduct audit of Town purchases to develop baseline										
Develop list of items to be replaced										
Identify local and regional contractors and retailers for providing Town procurement needs										
Implement Policy										
Annual reports										
Two-year reviews										

Legend		
		Target date/deadline
		Ongoing progress

Action items (continued)	2012			2013	2014	2015	2016	2018	2020	2022
	July	September	December							
Incorporate renewables/efficiency into plans for improving public buildings; assist local stakeholders										
Promote energy assessments or audits for all interested local businesses										
Connect interested residents and businesses with renewable energy installers										
Continue to pursue an energy performance contract										
Explore options for state/federal grants and loans, private funding or financing, and/or for developing a public energy financing program										
Obtain assessments of renewable energy opportunities in and around Alderson										
Assist local businesses in accessing financing and incentives to implement efficiency improvements										
Organize public events and trainings on energy efficiency, renewable energy, and sustainability										
Hire or appoint a Town Energy Coordinator (as funding permits)										
Develop/implement renewable energy and energy efficiency projects										
Track and monitor progress toward energy goals										
Support and sustain the Alderson Green Team and enhance partnership between Town and Green Team										
Pass a resolution or adopt an ordinance formalizing the partnership										
Appoint a Town Council member to the Green Team										
Work with Green Team to explore new ordinances, policies and programs to advance energy plan										
Develop outreach and educational materials for energy plan and Green Team activities										
Organize community and outreach events, programs and trainings										

Legend		
		Target date/deadline
		Ongoing progress