

Planning Commission Reporting Form For Municipal Plan Amendments Town of Chester, Vermont

October 15, 2018

This report is in accordance with 24 V.S.A. §4384(c) which states:

“When considering an amendment to a plan, the planning commission shall prepare a written report on the proposal. The report shall address the extent to which the plan, as amended, is consistent with the goals established in §4302 of this title.”

The amendment consists of revisions to four chapters as described below:

Chapter 3 Utilities and Facilities

This chapter has been updated to reflect current conditions since the Town Plan was last amended in 2015 as follows:

- The updated description of town departments, facilities and their needs was developed based on input from individual Department Heads and other town staff members.
- An inventory, status and needs of town owned historic buildings was added based on the input of the Historic Preservation Committee.
- References to identify potential funding sources for improvements were included.

The revised Chapter 3 identifies the town goals for transportation improvements and furthers the following goal: *To provide for safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.*

The revised Chapter 3 also presents recreational goals and furthers the following goal: *To maintain and enhance recreational opportunities for Vermont residents and visitors*

The addition of potential funding to Chapter 3 furthers the following goal: *To plan for, finance and provide an efficient system of public facilities and services to meet future needs.*

Chapter 5 Education and Child Care Facilities

This chapter has been updated to reflect the current status (in 2018) of the school district after enactment of Act 46. Enrollment numbers for local schools were also updated. Information about homeschooling in Chester was included.

The chapter continues to support the development and operation of child care facilities in town.

Chapter 6 Energy

The Energy Chapter was completely rewritten for this Town Plan amendment to serve as an enhanced energy plan to provide the Town of Chester greater standing in Public Utilities Commission proceedings.

The primary goal of the Energy Chapter is to make efficient use of energy, provide for the development of renewable energy resources and reduce emissions of green house gases.

In addition to reflecting the State goals for energy conservation, the revised chapter reflects the Town Plan Land Use chapter goals to conserve natural resources and to encourage and promote high density development and government buildings in village areas within walking distance of village residents. The revised chapter is consistent with the Town Plan Transportation chapter goals of expanding public and rail transportation as an alternative to automobile and truck traffic and of encouraging bicycle and pedestrian improvements.

Chapter 10 Economic Development

A section describing the Village Center designation was added to the Economic Development chapter, along with a map of the Village Center, to comply with statutory requirements.

The additional language furthers the following goal: *Economic growth should be encouraged in locally designated growth areas, employed to revitalize existing village and urban centers, or both, and should be encouraged in growth centers designated under chapter 76A of Title 24 of the Vermont statutes.*

Chapter 3 Utilities and Facilities

The development of public utilities, facilities and services should be based upon a projection of reasonably expected population increase and economic growth, and should recognize the limits of the Town's human, financial and natural resources. In addition, any proposed public facilities should recognize the Goals and Objectives set forth in the Town Plan. The town anticipates not more than 6% growth over the next twenty years. The existing municipal facilities and services are generally considered to be adequate to accommodate these anticipated future conditions, unless otherwise indicated in the Town Plan.

The Town of Chester annually approves a Capital Plan, which consists of annual capital expenditures. In 2016, the town approved a Bond Plan that finances capital item payments over multiple years for the first time. These planning efforts are beneficial as they identify priority capital needs and plan how to pay for them. These plans were not adopted as a Capital Budget and Program under 24 V.S.A. §4430. A duly adopted Capital Budget and Program can be used to limit or phase development in accordance with 24 V.S.A. §4422, and it is a pre-requisite for levying impact fees under 24 V.S.A. Chapter 131. It would also serve as a legal tool in Act 250 proceedings under criterion 9a (1) "Impacts of growth."

Town Administration

The Town of Chester is under the Town Manager system of Government. Five elected Selectboard members have the responsibility for general supervision of the affairs of the Town. This responsibility is carried out by an appointed Town Manager who administers all Departments of Town Government. The Town Manager system of Government should be sufficient for the foreseeable future. A Development Review Board (DRB) was established in 2007, replacing the previous Zoning Board of Adjustment. The DRB is responsible for all local development review, with the exception of zoning permits for permitted uses which the Zoning Administrator issues. The Chester Planning Commission performs planning functions for the Town in accordance with 24 V.S.A. § 4325.

Table 3.1 lists town-owned lands and facilities.

Emergency Services Departments

The Town of Chester is served by an Ambulance Service, a Fire Department and a full time Police Department. The Fire Department and the Ambulance Service have space for their vehicles and offices in the Town Garage.

Description		
Adams Family Aquifer	30.53	\$90,800
Bouchard Land	0.12	\$19,200
Cemeteries:		
Adams Road	1.00	\$6,500
Brookside	3.80	\$44,900
North Street	5.74	\$46,500
Pleasant View	8.90	\$93,400
Poplar Grove	0.42	\$2,700
Smokeshire	0.49	\$1,200
Spoonerville	0.28	\$1,800
Colbeth Land	0.12	\$16,200
Dodge Land	9.08	\$57,200
Emergency Services Land	4.04	\$95,400
Flamstead Acres (Lot 45)	0.11	\$13,600
The Green	1.50	\$57,500
Hadley Land	14.10	\$66,300
Hammond Park	0.55	\$41,000
Historical Society Building	3.86	\$481,800
Jeffrey Well Site	17.00	\$834,900
Land – Dean Brook Road	3.20	\$26,400
Library Building	-/43	\$623,300
North Street Bridge Field	0.50	\$32,000
Peck Land	4.00	\$42,000
Perry/Pierce Land	501.35	\$855,900
Quimby Land	1.10	\$25,800
Recreation Area (The Pinnacle)	37.28	\$709,200
Salt Shed/Henry Land	0.63	\$28,300
Town Garage	6.12	\$717,000
Town Hall	0.41	\$580,900
Wastewater Treatment Plant	13.45	\$2,752,900
Water Tank Site (GMUHS)	1.00	\$20,000
Weatherby Farm Land	40.00	\$105,000
Well Site on Canal Street	3.00	\$125,800
Wiley Land	3.00	\$73,600
Total	717.11	\$8,689,000
Source: 2017 Town of Chester Annual Report		

The Police department is located in the northeast corner of the Town Hall. In March, 2018 the newly-formed Chester Building Committee began work on a project to design, fund and construct a new Emergency Services Building which will house the Fire Department, the Ambulance Service, and the Police Department.

Ambulance

The Chester Ambulance Service provides emergency medical services and transportation to residents of Chester and Andover. The service is paid for by tax revenues allocated from the general fund, grants, and donations. The fees collected for service are paid into the general fund. The Ambulance Service is licensed by the State of Vermont and inspected annually. The Fire Department and Ambulance service are dispatched through the Hartford (VT) dispatch center, as are emergency services from neighboring towns. The consolidation of the dispatch function facilitates coordination and sharing of resources among towns and services.

The Ambulance Service is staffed by a paid Ambulance Coordinator, a full-time employee licensed at a minimum level of Emergency Medical Technician, and about 25 volunteers. The volunteers range from people who only drive the ambulance to those licensed as Advanced Emergency Medical Technicians (AEMT's). The levels of licensure available in Vermont are Emergency Medical Responder (EMR), a person trained in basic first aid, CPR and automated external defibrillation, Emergency Medical Technician (EMT), a person trained in all the EMR skills, plus more advanced skills such as nasal pharyngeal airways and intranasal and intramuscular medications, and Advanced EMT (AEMT), a person trained in advanced life support including intravenous and intraosseous access and advanced airway devices. The volunteers are paid a stipend for the calls they attend. The staff is divided into three rotating shifts and provide 24/7 coverage.

Chester also has an agreement with Ludlow to share licensed staff when needed. This increases the ability to respond to calls. A minimum of two licensed staff members are required for legal transport, with one staff member having at least an EMT license. The requirement of time for training, and time being available for calls, as well as the life and death responsibilities that are part of emergency medical care, represent a significant commitment on the part of the volunteers. Volunteers are extraordinarily dedicated people and are not easy to recruit.

The population is expected to age significantly over the next 20 years. This is already seen in an increase in the number of calls which now approaches 400 per year, but had stayed around 250 up until 2012. The age group most frequently served by the ambulance is over 60. An increase of cardiac arrest calls was noted over the winter of 2017 – 2018 as the bitter cold took its toll on our elderly citizens. The opioid crisis has also contributed to the rise in calls. The cost of calls where serious, life-saving medical treatment is administered is an increasing burden to the service.

The service has one transport vehicle, purchased in 2012. The Ambulance Service has decided to replace the vehicle after 10 years in order to take advantage of advances in patient transport compartments and chassis design. It will also get a better trade-in value for the old vehicle. With more room in the new Emergency Services building, a stock vehicle which can handle rough and snowy Vermont road conditions can be purchased. Formerly special vehicles with a shorter wheel base to fit in the limited garage space had to be ordered at extra expense.

Other equipment the Ambulance Service uses are a transport cot, a stair chair, child restraints to adapt the cot to fit a child and a monitor/defibrillator. Medical supplies must be kept on hand. Many supplies have expiration dates and must be replaced on a regular basis whether used or not. Some life-saving supplies such as Narcan, glucagon and epinephrine have risen in price significantly over the past couple of years. The unexpected price increases make it difficult to budget for the future, as well as afford in the present.

There is an informal mutual aid relationship between area towns and for-profit services, which is facilitated by the shared use of the Hartford (VT) Dispatch center. Combined with the arrangement with Ludlow, Chester is able to answer most of the calls it receives. The full-time employee position was unfilled for several months, which put added pressure on the Ambulance Service to handle weekday calls. Ideally, the full-time weekday employee is supplemented by a second licensed employee to cover other times. The cost benefit and possible level of service gain of having staff available at these times is being evaluated.

The Ambulance Service is currently housed in the Town Garage. The ambulance is parked in an enclosed, heated bay. Supplies are stored upstairs in a heated area. A small, locked office on that floor has a computer and printer. Some training takes place in a room shared with the Police and Fire Departments. There is a current need for a facility in the building where hazardous material equipment can be safely cleaned. This is one of the needs which will be addressed in the new Emergency Services building.

Fire

The Chester Fire Department serves the Town of Chester and contracts with the Town of Andover to serve that municipality as well. The Town of Chester has mutual aid agreements with many other towns through the Connecticut Valley Mutual Aid, the Southwest Mutual Aid and the Upper Valley Mutual Aid organizations. The Chester Fire Department is dispatched by the Hartford (VT) Emergency Communications Center.

The Fire Department owns the following vehicles:

Vehicle	length
Class A Truck	33'
Class A Truck	28'
Tanker	36'
Rescue Truck	30'
Brush /Utility Truck	27.5'
Boat on Trailer	25'
Brush/Rescue Trailer with ATV and rescue sled	25
Hazardous Materials Trailer	25'

The Fire Department is staffed by 1 Fire Chief, 1 Deputy Fire Chief, 1 Assistant Fire Chief, 2 Captains, 2 Lieutenants and several fully trained Firefighters. The Department's command structure is consistent with standards set forth by the National Fire Protection Agency (NFPA). Firefighters are paid once a year. They receive an hourly wage for the hours spent responding to calls and for the two trainings they attend each month. Firefighters volunteer their time for several other trainings each year.

Pressure on the Fire Department's resources comes from increasing state and federal requirements for training and safety equipment and changes to building materials and techniques. Some new building materials can give off toxic or carcinogenic smoke and fumes when burning. Firefighters need protection from these dangers. Newer construction techniques may also require different equipment. Training is essential to keep firefighters qualified, effective and safe. Additional training opportunities are constantly being sought.

The department seeks to meet Insurance Safety Organization (ISO) and National Fire Protection Agency (NFPA) standards. The department's ISO rating affects fire insurance rates for all the town's residents. With this goal in view, the department has enhanced equipment testing and servicing procedures and improved record keeping. The department has developed a plan to schedule equipment replacement instead of risking equipment failures. Looking ahead, the department recognizes the need for a simple, used ladder truck, as newer buildings have roof structures that make ground ladders ineffective and dangerous.

The health and safety of the volunteer firefighters is constantly considered. Gear washing equipment is used to protect firefighters from the toxic chemicals deposited on the gear by smoke from fires. A ladder truck would make fires requiring ladders less dangerous. A ventilation system that would clear toxins in the air emanating from equipment after a fire would also be helpful.

Police

The Chester Police Department serves the Town of Chester and is also paid to assist Okemo Mountain Resort in Ludlow, VT with traffic control. It currently has offices in the northeast corner of the Town Hall on the first floor. This is not a secure location and arrests are mainly processed at the Westminster State Police Barracks.

The Police Department has a full-time chief, a full-time sergeant, four full-time officers, three part time officers and one canine when fully staffed. All Police officers have graduated from the Police Academy. Currently the Police Department owns and maintains three police cruisers. The vehicles are replaced every 4 years due to high mileage and use on rough roads. Computers, firearms, ammunition and personal protection equipment such as bullet proof vests are paid for out of the town budget and by grants from Homeland Security. The Chester Police Department responded to 1,179 calls for service in 2017.

Chester Police officers receive 25 – 30 hours of training annually. In 2017, training topics included interacting with persons having a mental health crisis, administering Narcan, crash investigation, domestic violence, death scene investigation, firearms, and field training officer certification.

Chester's Police Department gets support from the Vermont State Police for processing arrests and background checks. This was formerly done at the Rockingham barracks. With the closing of that

barracks in 2016, arrests are now processed at the Westminster State Police barracks. Adjustments are still being made to accommodate the increased distance.

Chester has experienced an increase in drug-related crime due to the opioid crisis. State and federal regulations have also increased space demands for the Police Department. The Chief of Police is taking part in the effort to build a new Emergency Services building which will have space for the Police Department as well as the Fire Department and Ambulance Service.

Water

The Village in the Town of Chester is served by the Chester Water Department. The water system has two (2) wells. The water from those wells is particularly delicious and only requires a bit of baking soda added to counteract acidity. The Jeffrey Well #2 Pump Station is located on an aquifer at 391 VT Route 103 North and is the primary pump station and water source for the town. The well is capable of producing 576,000 gallons of water per day. The current average daily use is approximately 164,000 gallons. This location is designed to satisfy the town's water needs for the foreseeable future. The Canal Street Well is located at the end of Canal Street in the middle of the village. It is an emergency backup source only. The water is stored in two water storage tanks. The older tank is west of town and the newer tank is south and east of town. The tanks are drawn down as needed and refilled by the Jeffrey Well. The tanks are normally filled at night to utilize off-peak hours for the best electrical utility rates.

The water system serves the needs of the community well and correlates well with the Land Use Regulations and the planned future development of the Town. Improvements made in 2016 and 2017 include the following:

- A second storage tank and the piping needed to integrate it into the system was completed.
- 900 feet of old 4- and 6-inch cast iron pipe on Coach Road was replaced with 8-inch ductile iron pipe. 900 feet of 8-inch ductile iron pipe was added on First Avenue to complete a loop in the system and eliminate 2 dead ends. This improves water quality and service for that area.
- The water line to the Wastewater Treatment plant was changed from a 1 1/2-inch plastic line to an 8-inch ductile iron pipe, bringing much more reliable service to the Wastewater Treatment plant.
- 26 hydrants were replaced in the village and an 8-inch line and hydrant were added to Breezy Lane.
- The Jeffrey Well was modified to reduce the amount of water hammer caused when the pump is activated.
- Agitators and wireless remote telemetry have been added to both storage tanks, so that the tanks can send signals to the controls at the Jeffrey Well station.

These upgrades ensure that the water system is, and will remain, in compliance with the Federal Safe Drinking Water Act. They also allow required fire flows to be maintained during emergencies. The system currently serves 577 accounts containing 886 units. The system historically sees about a 5% increase in demand every 10 years. Ongoing water main replacement over the next 20 years is expected to reduce that by eliminating several leaks in the old pipe.

Future projects under consideration include:

- Mapping all the water and wastewater mains, service connections to them, pump stations, river crossings, manholes, curb stops, gate boxes, and the ground water drainage system using GPS,
- Isolating ground water to keep it out of the wastewater system,
- Installing a Supervisory Control and Data Acquisition system (SCADA) for wastewater to improve efficiency, reduce operation cost, improve record keeping and provide more accurate operating information, which may be completed in conjunction with a new mapping program implemented in 2018 that is based on parcel data,
- Upgrading water and wastewater maintenance tools, including a small line cleaner, a new pump for draining excavation sites at line breaks and other power tools, to increase the speed of repairs.

Large projects (with costs in excess of \$100,000) may be funded by the Drinking Water State Revolving Fund or Rural Development.

Wastewater

In 2006, the Town of Chester constructed a new upgrade to the wastewater treatment plant at a cost of nearly \$3 million. The new facility was one of the largest construction projects that the Town of Chester has undertaken in recent years. The town also updated the Wastewater/Sewer Ordinances, which require some pre-treatment for some commercial users due to excessive BOD (biochemical oxygen demand, which is dissolved oxygen needed by aerobic bacteria to digest waste in water) and chemical discharges that cannot be treated at the municipal facility.

The system currently serves 489 accounts and 786 units, with a steady increase every year. With the current upgrades, the capacity of the wastewater treatment plant is rated at 175,000 gallons per day, with 500,000 per day for emergency operations mode during high-water and flood stages. The average daily usage is between 90,000 to 100,000 gallons per day.

The Wastewater Department has upgraded the pump station that is located on Pleasant Street to increase efficiency and reduce maintenance requirements. Upgrades are planned to address the ground water drainage in the wastewater service area to reduce the infiltration into the system, which can overload it and require additional and unnecessary treatment at the plant. During the spring thaw and wet periods, some residences run sump-pumps that are discharged into the system. This is not allowed under State and Federal regulations. The town is working on a properly designed storm drainage system which will appropriately direct the ground and surface water to a designated location and bypass the wastewater system. These improvements may be funded by the Clean Water State Revolving Fund, Rural Development or grants such as the Clean Water Block Grant or Ecosystem Restoration Grant.

Solid Waste District

The Town of Chester is a member of the Southern Windsor/Windham Counties Solid Waste Management District, which has prepared a Solid Waste Implementation Plan, with an appointed representative that serves on the District Board of Supervisors. To manage the district, the board engaged the services of the Southern Windsor County Regional Planning Commission. The district has also adopted a Waste Management Ordinance, effective February 1, 2008, that included licensing commercial haulers. They pay a surcharge of \$7.00 per ton on municipal solid waste, construction and demolition waste, and bulky wastes generated within the District, which helps pay District expenses, including maintaining a website, www.vtsolidwastedistrict.org, which contains information about

reducing, reusing, recycling and household hazardous waste.

The Town does not provide for refuse collection. Residents may contract with a private waste hauler or bring refuse, including recyclables, brush, lawn and garden waste and kitchen waste, directly to the Chester-Springfield Recycling Center and Transfer Station at 135 Fairground Road in Springfield, one mile north of Riverside School (west side). They operate on a ticket system for trash payment. Tickets can be purchased at the Chester Town Hall, and other places locally.

A list of accepted recyclables is available at the Transfer Station or at the regional District website, www.vtsolidwastedistrict.org. Most recyclables are accepted free of charge, including all types of batteries, fluorescent tubes and bulbs, televisions, monitors, printers, hard drives and peripherals. There is a "Second Chance Shop" for unwanted, but still usable, items including books. Architectural salvage can be found or donated. Metal is accepted free of charge; bulky waste is charged by weight. Household Hazardous Waste collection take place at several locations in the District each spring and autumn.

In 2012 the Vermont Legislature passed Act 148, The Universal Recycling Law, an "act relating to establishing universal recycling of solid waste." The Vermont Materials Management Plan: Moving from Solid Waste towards Sustainable Management, was effective on June 18, 2014. As of July 1, 2017, kitchen waste must be accepted at all transfer stations in Vermont. Keeping food waste out of landfills will become mandatory on July 1, 2020. Waste haulers and facilities are required to collect recyclables (metal, glass, #1 and #2 plastics, paper and cardboard) leaf and yard debris and clean wood.

Electric Utilities

Electric power for the Town of Chester is provided by Green Mountain Power. Electric transmission service is provided by the Vermont Electric Power Company (VELCO). Underground utilities are encouraged to preserve the historic look of the village and the beauty of scenic areas.

Telephone, Cable Television and Internet Infrastructure

Telephone, high speed internet and television service are available in Chester through the town-wide fiber optic network built by Vermont Telephone (VTel). Comcast provides television cable service, high-speed internet and phone service. Dish provides satellite television service. These vital improvements enable people to work efficiently at home, reducing commuting traffic and benefiting the environment of the Town. It also offers essential support to businesses that may want to locate in this picturesque town.

Communications Towers and Structures

A modern telecommunications infrastructure is essential to the public welfare and economic development. The Town of Chester is fortunate to own a site for a communications tower, a low hill on the western edge of the town center called the Pinnacle. The towers currently on the site cannot be seen in most parts of town. In 1997, at Chester's invitation, US Cellular erected the first cellular telephone tower at that site next to the existing low band tower. A second cellular phone company, Cellular One, rented space on the tower. VELCO offered to build a higher capacity tower for the town in 2015 since VELCO needed to expand its communication system to meet state mandates. The offer was accepted and the new tower was completed in 2018. Currently Cellular One and AT & T lease space on the new tower and US Cellular remains on the old tower while contract issues are resolved. Sprint and Verizon are negotiating for space on the new tower. The town also uses the towers for police, fire,

ambulance and public works radio communications. This arrangement has provided Chester with cellular phone service and given the town rental income as well. It has also prevented a proliferation of towers along ridge lines, which would mar the scenic vistas of the town. The town's ability to control where communication towers may be built is limited by the Federal Telecommunications Act of 1996. This arrangement has worked well for everyone concerned so far.

Recreation

The Town of Chester is fortunate to have some of the finest recreation facilities in the area. The operation of the Pinnacle and Memorial Fields, also known as Cobleigh Street Fields, are under the direction of a full-time Recreation Director. These facilities should continue to receive the financial and volunteer support necessary to maintain the facilities and to provide program leadership. They should be sufficient, with the recommendations set forth herein, to serve the needs of the community for recreation facilities for the next 25 years.

Recreation Department projects may be funded by Land and Water Conservation Fund grants as well as the Buildings and General Services Grants.

Athletic Fields

There are five outdoor athletic facilities available to Chester residents.

1. Green Mountain Union High School has a soccer field, baseball field, track and other land areas used in school recreation and sports programs.
2. Chester-Andover Elementary School has a playground and athletic field used for school recreation and sports programs.
3. Pinnacle Recreation Area contains 25 acres and is the hub of summer and winter recreation for the towns sports program. The area includes a recently upgraded outdoor swimming pool, skateboard park, volleyball courts, basketball court, two tennis courts, two Little League baseball fields, an ice rink, playground and 12-hole disc golf course. The hillside is also used for sledding, tobogganing and snowmobiles, and the area is a VAST snowmobile access area with parking.
4. Memorial Fields, also known as Cobleigh Street Fields contains a ball field used for softball and soccer.
5. Green Mountain Softball facility - This privately-owned facility has volleyball courts and two softball fields, which are used for annual softball tournament events and are made available for Green Mountain High School softball games.

Some future objectives of the Recreation Department are a new Soccer Field, a dog park, walking trails around the Pinnacle and an indoor recreation facility. All recreation fields are utilized to full capacity and the Soccer Program is growing rapidly.

Disc Golf

Constructed in 2016, the Chester Disc Golf Course is a popular and highly utilized recreational resource in town. The course winds its way through hilly, wooded and previously under-utilized town property at

the Pinnacle Recreation Area. Three more holes have been added in the summer of 2018 and an additional 6 holes are planned for 2019. The course is also used as a snowshoe trail in the winter.

Swimming

The swimming pool located at the Pinnacle Area is the most highly utilized recreation program for the Town. Approximately 200 children per year receive swimming lessons through the Recreation Department. In addition, the swimming pool averages 50 to 60 kids per day during the summer months. The current pool was upgraded in 2017, which will extend the life of the pool to at least 2037. More renovations and improvements are planned for the bathhouse and the snack shack which operates at the pool location.

Hiking Trails

There are currently three hiking trails on Chester public land. The town supports the continued expansion of the hiking and biking trail system including the potential purchase of additional lands to achieve this.

The **Lost Mine Trail** is two miles long and runs through Chester's 550-acre Town Forest. The trailhead is located just west of town off of Balch and Water Farm roads. The trail has a variety of features including a historic mine, pine and hemlock groves, a forest management area, massive and intricate stone walls, mossy streams and hillside caves. The trail is rated moderate for hiking.

The two-mile **Butternut Hill Trail** is also located in Chester's Town Forest. The trail is adjacent to and connects with the Lost Mine Trail, to form a four-mile loop. It ascends to the summit of Butternut Ridge (1,725 feet) and offers views of Stratton and Magic mountains and other hills to the southwest. There are multiple trails heads with small parking areas that offer access to the moderate/strenuous hike.

The **Green Mountain Nature Trail** is a two-mile loop trail that traverses through the 160-acre forest adjacent to the Green Mountain Union HS. This trail offers a moderate hike that winds and climbs through evergreen and hardwood forests. The trail also features a large glacial boulder, stone walls, several wooden bridges and views of the South Branch Williams River.

Looking ahead, the Town will continue to look for trail development opportunities on Town property, in particular a trail that is within walking distance of the village green. The 14-acre Brookside Town Forest Property, directly north of the Brookside Cemetery and across Lover's Lane brook, will continue to be evaluated for the development of a trail. Continued planning and design for enhancing Brookside Cemetery should also incorporate plans to access the Town Forest property across the brook. A pedestrian-style, wooden covered bridge spanning Lover's Lane Brook would be an ideal accent to the landscape and trail, and a unique attraction within walking distance of the village green.

Likewise, the Town will continue to assess opportunities to develop a flat, pedestrian-friendly trail either along the Williams River, on one of its tributaries, or in some other opportune location or corridor. A relatively flat walking trail, accessible from the village center, would greatly enhance walking and hiking experiences for everyone, and offer a more natural setting than the existing sidewalks in the residential areas.

At the Pinnacle Recreation Area on Lover's Lane, the establishment of a loop trail to offer walkers and hikers the opportunity to circumnavigate the pinnacle (summit) will be assessed for development. Construction of a loop trail would provide the Town with another trail asset in the heart of town and enhance and broaden the hiking opportunities at the recreation area.

For mountain bike enthusiasts, the establishment of a more defined mountain bike trail/trail network (both on and off road) within the greater Chester area will continue to be explored. To encourage winter recreation, all town hiking trails will be promoted for snowshoeing and, where feasible, cross country skiing. The Pinnacle area in particular, will be established and known for its snowshoeing 'track'.

Eventually, the existing trails will be linked to create an integrated Chester Town trail network, bookended by the GM Nature Trail to the east and the Pinnacle Trail to the west.

Winter Recreation

The Chester Snowmobile Club is a private organization which cooperates with Vermont Association of Snowmobile Travelers (VAST) to bring an exhilarating and safe winter travel experience to Chester residents and visitors alike. With private landowners it plans, lays out and maintains 65 miles of snowmobile trails in the Chester area. These trails connect to the VAST state-wide trail system. Eight miles of those trails are on Town of Chester property and 23 miles of the trails are within the town itself. This system of trails attracts tourists in season, and is beneficial economically to the Town of Chester and its tourist industry. The club has assisted the Chester Fire Department by providing a machine and sled for use in medical emergencies on the local trails. The club grooms the sliding hill at the Pinnacle, the track for sleigh rides and dog sleds at Winter Carnival and provides a Port-a-Potty during the winter at the Pinnacle. An effort to establish a trail-side fuel station in Chester is underway.

Forest Lands

The State of Vermont, Department of Forests and Parks owns the Williams River State Forest, 130 acres of land located in the southwest corner of town, also known as the Popple Dungeon area.

The Chester Water Department owns 550 acres of land off Reservoir Road in the geographic center of the town. The land was purchased as a watershed area and holds an 11-acre reservoir which is used for recreational purposes. The reservoir previously served as the town's drinking water source. It is now preserved for use during an emergency, such as if the Jeffrey and Canal wells are not available. The 550-acre site operates under a ten-year Forest Management Plan prepared and managed by the State Forester. The plan was first adopted in 1983 and is revised annually. Under this plan and careful management the Town Forest provides income to the Water Department. The town also owns a 139-acre parcel at the site of the new water storage tank. The land is primarily forested and the majority of it is in a conservation easement.

The Doctor Adams land (Lot 3 on Map 52) contains 30.53 acres and is also town-owned. It is valuable as wildlife habitat and is studied by the Environmental class at Green Mountain Union High School. It is also available to others for studies.

Another tract of land has been offered to the town by the Tomasso family. Negotiations for its acquisition are underway.

Hunting and Fishing

Chester's extensive woodlands provide hunting for wild game and game birds. The Town Forest is open in season for hunting as provided under State Regulations. Rivers and streams available for fishing are the south, middle and north branches of the Williams River and its tributaries. Within the Town Forest lands, the reservoir pond has been stocked with trout and provides good fishing for other species including bass. The Chester Rod and Gun Club, a private organization, provides Hunter Safety classes, which are required for those wishing to obtain hunting licenses.

Historic Buildings

The Town of Chester has many historic buildings including these owned by the town. The Chester Historic Preservation Committee maintains them and seeks to promote uses for them by the town.

Building	Year Built	Present Use	Needs
Academy Building	c. 1881	Chester Historical Society	Regular maintenance for slate roof and building. Interior renovation with the goal of year-round operation.
Hearse House	c. 1830	Museum	Regular maintenance for slate roof and building
Public Tomb	1850	Winter storage of caskets while awaiting spring burial.	Regular maintenance for slate roof and building
Whiting Library	1891-92, 1995	Public Library	Regular maintenance for slate roof and building. Drainage, sidewalk, & driveway repairs
Town Hall	1884	Town Hall offices, Police, Department	Regular maintenance for slate roof and building. Renovation inside & out planned for 2018. Town funds are allocated.
Yosemite Fire House	c. 1870	Stores Town's antique fire vehicles	Regular maintenance for slate roof and building. Planned creation of VT Fire Fighters' museum
Jeffrey Barn	1890s	Awarded grant for 2018 condition assessment that will determine possible restoration and future use	Seeking someone qualified to assess the barn's condition.

The Chester Historic Preservation Committee will be pursuing additional grants from the Preservation Trust and Historic Preservation grants from the Vermont Agency of Commerce and Community

Development for the Academy Building and the Yosemite Fire House. Capital campaigns are also being planned.

Public Facilities and Utilities Goals

1. To provide public infrastructure that furthers the goals, policies and recommendations of the Chester Town Plan.
2. To plan for, finance and provide a safe, efficient and convenient system of public facilities and services to meet current and future needs.

Public Facilities and Utilities Policies

1. Encourage citizen participation at all levels of the local planning process.
2. Provide adequate public facilities that meet the needs of Chester residents and support the desired future conditions identified in this Town Plan.
3. Require developers to pay for any infrastructure expansions or increases in municipal services required when the demands to serve the new development exceed existing and anticipated capacity levels.

Emergency Services

4. Provide the residents of Chester the best possible Ambulance, Fire and Police service by supporting improvements to these services that are prudent and necessary.
5. Require any new housing development in Chester to provide fire protection that meets state and local regulations.
6. Support the continued cross training of police officers as Emergency Medical Technicians.

Water and Wastewater Services

7. Provide the Chester Village water customers with a pure, clean and reliable water supply.
8. Provide the Chester Village residents with a safe, efficient and reliable sewage treatment system.

Solid Waste and Recycling

9. The Town shall continue involvement with the Southern Windsor/Windham Counties Solid Waste Management District to promote continued responsible waste management, cooperation with surrounding towns and expanded trash reduction efforts.
10. Work to reduce landfill garbage and increase reuse and recycling.
11. Promote the proper disposal of home hazardous materials by placing signs at strategic locations in town to announce the semi-annual collection dates, and announcing the collection dates in the town newsletter and website.
12. Support the implementation of Act 148, the Universal Recycling Law by maintaining recycling bins at public gathering places on town property, and in town offices, and allowing solid waste processing businesses in the bylaws.

Recreation

13. Provide recreation programs to the Town of Chester residents that meet the recreation needs of all residents regardless of age.

14. Maintain the 550-acres Town Forest as a managed forest and continue access to it for field studies, fishing and hunting.
15. Maintain the Doctor Adams land for wildlife and scientific field studies for all.
16. Continue the use of the public lands as resources for hunting and fishing and encourage private owners to do the same.
17. Pursue expansion of the existing trail network. Purchase of additional lands should be considered to achieve this objective.

Public Utilities

18. Provide residents with safe, effective and efficient utility service.
19. Place utility lines in areas designated for growth.
20. Place new utility lines along existing corridors whenever possible; multipurpose use of utility corridors is encouraged with common use of utility poles for telephone, electric, cable and fiber optic lines.
21. Consider aesthetic and natural resource impacts when placing utility lines.
22. Promote underground electric lines where possible and practical.
23. Do not construct new towers, access corridors and utility poles serving towers when adequate communication coverage can be obtained through use of existing structures.

Priorities for Action on Solid Waste:

1. Promote education for citizens on trash reduction such as composting and eliminating single use items with poor recycling potential.
2. Promote education for businesses and organizations concerning solid waste disposal and reduction.
3. Encourage citizens, businesses and organizations to make extensive use of composting and recycling at point of use, the transfer station and curbside pickup.
4. Enforce the prohibition of illegal roadside dumping.
5. Encourage recycling and compost drop-off and pick-up operations to establish in the immediate Chester area for increased resident convenience.

Chapter 5 Education and Child Care Facilities

Education Facilities

School districts in Vermont began a process of consolidation after the passage of Act 46 in 2015. Chester is currently a member of the Green Mountain Union School District with the towns of Andover, Baltimore and Cavendish. The Green Mountain School District is a member of the Two Rivers Supervisory Union along with the Ludlow Mount Holly Unified Union School District. There are 6 directors from Chester on the 11-member Green Mountain Union School District board. The Town of Chester has two school buildings. Chester-Andover Elementary School on Main Street houses grades K-6 and Green Mountain Union High School on Route 103 south of the center houses grades 7-12.

Historically, the number of students enrolled in the Chester-Andover Elementary School has ranged between a high of 373 students in 1960 to a low of 260 in 2016-2017. Enrollment has gradually decreased in recent years.

The Green Mountain Union High School (7-12), which was built in 1971, has students from the Towns of Andover, Cavendish, and Chester and, since 2000-2001, tuition students from the Towns of Baltimore, Grafton, Londonderry, and Weathersfield.

Since 1980 the enrollment has fluctuated between a high of 479 in 1980 to a low of 313 in 2016-2017.

Green Mountain Union High School students may receive vocational and technical training at the Howard Dean Educational Center, in Springfield, VT. Continuing education programs are offered through Community College of Vermont and Johnson State College External Degree Programs in Springfield. The Head-Start Program is being offered at Green Mountain Union High School. Opportunities in Learning, an alternative educational program, is offered at Cavendish Town Elementary School, in Proctorsville, VT.

Capital needs are currently being studied and addressed by the Town and the School Trustees.

Homeschooling in Chester is overseen by the Vermont State Board of Education, Home Study Program. Most of the information needed to set up a homeschool in Vermont can be found on the Home Study website at <http://education.vermont.gov/vermont-schools/school-operations/home-study>. Home Study Enrollments and Evaluations, also known as End of Year Assessments (EOYA,) must be received by August 1 each year. In accordance with State Board of Education, AOE accountability goals, and Vermont law, the home study program works to ensure that all students enrolled in home study programs have access to a quality education. When required, the program provides technical assistance to improve the quality of a home study program. Homeschooled students are also able to participate in extracurricular sports and arts/theater programming at the Chester-Andover Elementary School and the middle and high

schools at Green Mountain Union High School, as well as up to 3 of the core classes. Additionally, students that are enrolled in the public school in Chester are entitled to participate in home study of up to 3 core courses. The number of homeschooled students has been increasing in recent years, up from 14 in 2013 – 2014 to 20 in 2015 – 2016.

There are a variety of classes and programs available in Chester to enrich the homeschool experience. Several homeschool groups meet on a regular basis in the region, and at least one evaluator lives in Andover, part of the Two Rivers Supervisory Union. The Whiting Library in Chester, the Springfield Town Library, and Phoenix Books Misty Valley Bookstore in Chester all offer children's programming throughout the year. Country Treasures in Chester offers quilting classes. Art, pottery and painting classes are offered at Endless Creations in Chester, and at Main Street Arts in Saxtons River. Music and dance classes are available through the Community Art Center, Springfield Dance Factory, and the Chester Recreation Department. There are two outdoor wilderness programs for youth in neighboring Andover, O.W.L.S. and Dancing Moon Girls. Several yoga classes are available in Chester. The Nature Museum in Grafton hosts programming throughout the year in Grafton and at the NewsBank building and Whiting Library in Chester.

The Vermont Home Study Team is very active in helping homeschoolers in their educational pursuits. An email list with opportunities is sent out on a regular basis by Alicia Hanrahan of the Vermont Home Study Team. She can be reached at Alicia.Hanrahan@vermont.gov. Other useful list serves are SoVtHomeschoolers@googlegroups.com for Southern Vermont and groups.yahoo.com/neo/groups/cvt_homeschoolresource/info for Central Vermont. Chester is on the edge of these two regions.

Child Care Facilities

Child care is an important consideration for employers and families with young children. In 2018, Chester has two licensed child care providers including:

- Chester Community Preschool at Green Mountain Union High School
- Chester-Andover Elementary School After School Program.

There are also two registered family child care homes in town, according to the Vermont DCF Bright Futures child care information [website](#). There are many additional licensed providers and registered homes in the surrounding towns. Child care facilities are allowed for under Chester's Unified Development Bylaws in accordance with Section 3.10.

Goals and Policies

Education and Child Care

1. The Town should continue to provide high quality, cost effective educational opportunities and amenities to all students residing in Chester, as well as those attending Chester schools, who reside in other Towns.
2. Any new development which results in significant increases in the number of school-age children should not place a significant burden on Chester's taxpayers or existing school facilities.
3. Support the development and operation of child care facilities within the town.

Chapter 6 Energy

1 Purpose

It is the overall intent of this chapter to encourage the efficient use of energy and the development of renewable energy resources in accordance with 24 V.S.A. §4302(c)(7). It is also the intent of this energy chapter to address the requirements of Act 174 of 2016 and to meet the enhanced energy planning standards developed by the Vermont Department of Public Service (DPS). This was prepared based upon the *Guidance for Municipal Enhanced Energy Planning Standards* (DPS; March 2, 2017) in order for the Chester Town Plan to be given greater weight in the Section 248 process. This chapter describes existing conditions in Chester and conveys community policies on energy conservation, renewable energy production, and how land uses can contribute toward energy conservation.

The Southern Windsor County Regional Planning Commission (SWCRPC) has developed a 2018 *Regional Energy Plan* to meet these standards in order to receive Section 248 “substantial deference”. Chester is coordinating the development of this municipal energy plan with the SWCRPC so that:

1. The municipal plan is informed by the ongoing regional energy planning process; and,
2. The municipal plan is compatible with the regional plan.

This energy chapter was developed with assistance from the SWCRPC through funding provided by the Vermont Department of Public Service.

1.1 Community Energy Survey

A survey was conducted in January 2018 to get input from residents to assist in this enhanced energy planning process.

Key findings from this survey are summarized below.

1. The vast majority of respondents indicate that energy issues are very important (57%) or important (29%) to them. A majority (about three-quarters of the respondents) support the goal of 90% of energy coming from renewable sources by 2050.
2. There is very strong support for roof-mounted solar arrays.
3. Strong support was expressed for non-residential solar power.
4. Support was expressed for non-residential wind power; however, 23% are not in favor and another 21% are neutral.

For more detail about the survey see Appendix _.

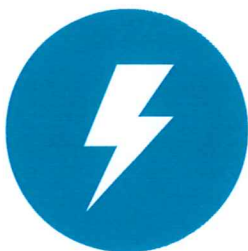
1.2 Energy Goals

Through the 2016 Vermont Comprehensive Energy Plan (CEP) and Statute, the State of Vermont has identified a number of goals and strategies to achieve energy conservation throughout the state. The

Due Consideration: To give such weight or significance to a particular factor as under the circumstances it seems to merit, and this involves discretion. [*Black’s Law Dictionary, 6th ed. 1990*]

Substantial Deference: Means that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy. [30 V.S.A. §248]

Town of Chester embraces the State Energy Goals¹ including but not limited to the following. Through the detailed policies and actions contained in this plan, Chester will strive to achieve these goals.



Reduce total energy consumption per capita by

15% by 2025

More than one third by 2050



Reduce greenhouse gas (GHG) emissions from 1990 levels

40% reduction by 2030

80% to 95% reduction by 2050



Meet remaining energy need from renewable sources

25% by 2025

40% by 2035

90% by 2050

2 Analysis of Energy Use

2.1 Power Generation and Transmission Facilities

Green Mountain Power (GMP) is the electric utility provider in Chester and surrounding towns. There are no utility-scale power generation facilities located in Chester. There are 38 known renewable energy generation sites in town presently. Two commercial-scale ground-mounted solar facilities were constructed in Chester within the last few years, both in close proximity to the Chester Substation.

¹ Energy goals as referenced in 24 V.S.A. §4302(7), 10 V.S.A. §578(a), 10 V.S.A. §580, 10 V.S.A. §581, and in the Vermont Comprehensive Energy Plan

There is one known residential-scale wind turbine located in Chester at this time, which does not appear to be net-metered. See Appendix A for more detail about existing energy generation.

Electric transmission is provided by the Vermont Electric Power Company (VELCO). Transmission facilities located in Chester include the following, which are shown on the maps in Appendix _:

- Chester Substation, located along VT Route 103 south of the intersection with Trebo Road;
- A 46 KV line that parallels Trebo Road;
- A 46 KV line that cuts through the northeast corner of Chester; and,
- A 345KV line along the western town boundary with Andover.

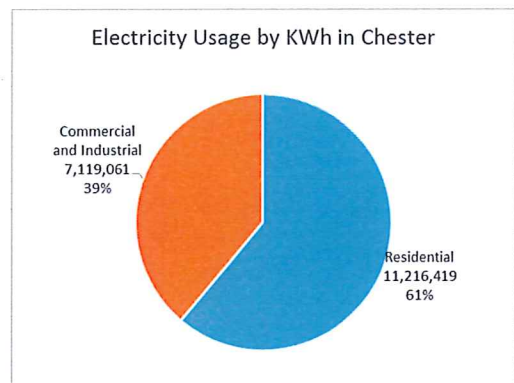
2.2 Energy Usage

As discussed in the 2016 *Vermont Comprehensive Energy Plan* (CEP), “fossil fuels currently play a dominant role in meeting Vermonters’ demand for energy services, with gasoline and distillates (namely diesel and heating oil) alone supplying around half of all of Vermont’s primary energy consumption”. The CEP states that less than 20% of the statewide consumption of primary energy is from renewable energy sources. More than two thirds of that renewable energy comes from the electric power supply, which includes power generated by hydro, biomass, wind, solar and other facilities. The remaining renewable energy consumption in Vermont is largely comprised of wood for home heating and ethanol blended into gasolines².

2.3 Electricity

In 2015, residences accounted for 61% of the current total annual electricity usage, and commercial and industrial uses accounted for 39% of the total 18,335,480 kWh used in Chester. The figure opposite summarizes electricity use data provided by Efficiency Vermont. Average residential usage is 6,689 KWh (2015).

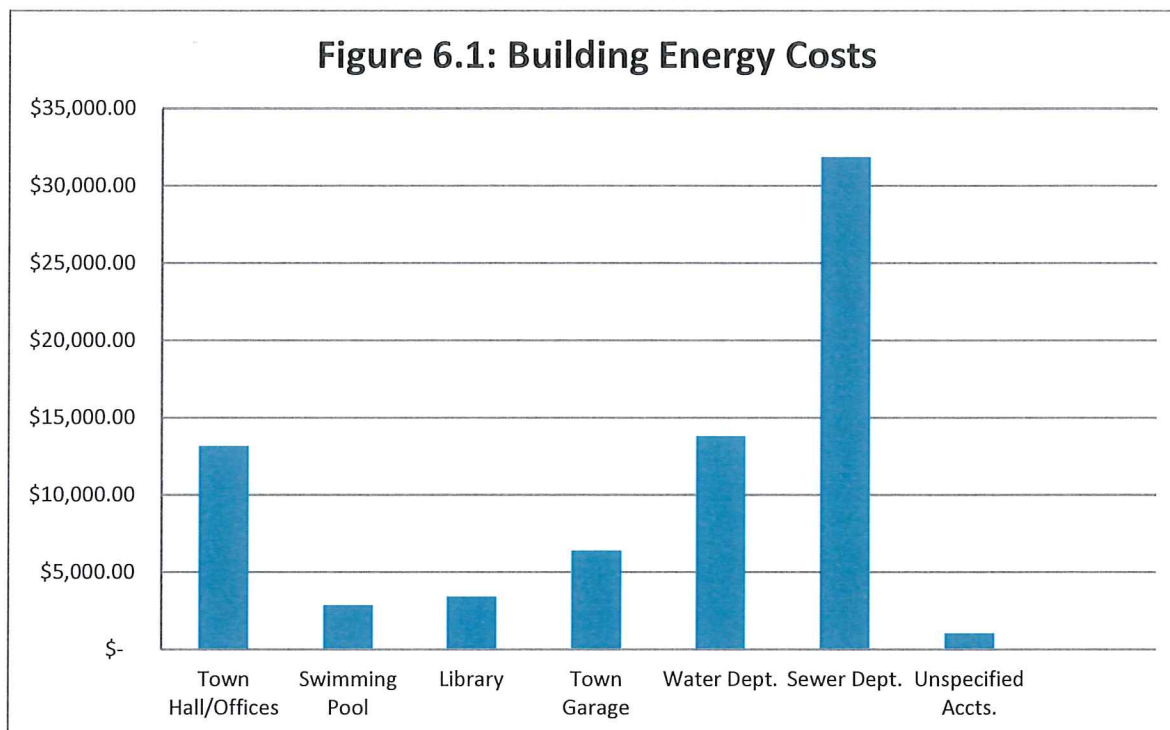
According to Department of Labor Statistics, there were 129 commercial establishments in Chester during 2015.



Total electricity consumption have essentially leveled off in recent years. (There was a slight increase in total electricity usage in Chester between 2014 and 2016.) See Appendix A for more detail.

An older energy analysis found that the Town of Chester spent \$192,795 on fuel (2010), of which 38% was for municipal buildings and 62% for the municipal vehicle fleet. When comparing costs for municipal facilities, the Sewer Department had the highest fuel costs, followed by the Water Department, and then the Town Hall (see figure on page 4). An energy audit was performed for the Town Hall and a number of recommendations have been implemented to date, including air sealing and basement insulation. The Town is exploring opportunities to make additional energy efficiency improvements to the Town Hall. Audits of other municipal facilities would be helpful to identify cost-effective energy upgrades for other municipal facilities.

² *Vermont Comprehensive Energy Plan* (Department of Public Service, 2016)



2.4 Heating

Of the 1,793 total household units in Chester, 18% are seasonal and 20% are renter-occupied. See Figure __ which summarizes total housing units in Chester by type from the 2010 Census Bureau.

Fossil fuels are currently the primary fuel type used for heating structures in Vermont³. According to American Community Survey (ACS) data (2011-2015), the predominant ways to heat homes in Chester include fuel oil (62%), wood (25%) and propane/LP gas (13%). In 2015, the estimated average annual cost to heat a home was \$1,452 and about \$6,248 to heat a business. See Appendix A for more detail about heating existing buildings.

Wood is the only form of these heating fuels that is renewable and locally produced. Sustainable forestry operations are important not only to supply fuel wood for residents, but also to maintain an active working landscape in rural Chester and support a local forestry economy.

2.5 Transportation

As a rural area, transportation options for Chester residents is dominated by the personal automobile (see the Transportation Chapter for more information about other modes of travel). The negative environmental impacts of single-occupant vehicle driving is well documented. Costs associated with using an automobile for most of your travel needs can be significant (see the Housing Chapter for more information on household transportation costs). About 88% of the local work force travel to jobs located in another town. Common work destinations are Chester, Springfield, Ludlow, Bellows Falls, and Rutland. Approximately 71% of employed Chester residents drive alone to work. The average commute time is 21 minutes.

³ Vermont Comprehensive Energy Plan (Department of Public Service, 2016)

According to ACS data, there were about 1.9 vehicles per occupied household in 2015. The average vehicle miles traveled in a year is estimated at nearly 13,200, which accounts for approximately 1.9 million gallons of total fuel used and an estimated total fuel cost of more than \$4.4 million.

Fuel costs are volatile. Gasoline costs of around \$4 a gallon in 2008 and \$3.70 in 2014 were challenging for many household budgets. During June 2018, average motor vehicle fuel costs in Vermont are about \$2.96.

Chester's *Village Center Master Plan* includes recommendations to improve the walking and bicycling facilities in the villages, some of which the Town is actively implementing.

3 Energy Targets

The standards that the Department of Public Service has established for energy targets must be met if this Plan is to receive substantial deference in Section 248 energy siting proceedings. Chester is utilizing targets (or scenarios) developed using the Long-Range Energy Alternatives Planning (LEAP) Model and provided to Chester by the SWCRPC. The background for the targets are described in more detail in the *2018 Southern Windsor County Regional Energy Plan*. The purpose of the targets, when combined with the analysis presented in the previous section, are intended to provide an overview of existing energy use and projections for the pace of change that is needed over the next three-plus decades. **The targets simply demonstrate that, in order to meet 90% of Vermont's energy need from renewable sources by 2050, a significant amount of change will be needed in the forms of energy conservation, behavior modification, and development of new local renewable energy generation.**

Energy targets for Chester are presented in Appendix _.

4 Implementation Actions (Pathways)

In order to meet our stated energy goals and targets, the Town of Chester identifies the following implementation actions, also referred to as "Pathways". These implementation action categories are intended to be consistent with those used in the *Guidance for Municipal Enhanced Energy Planning Standards* (DPS; March 2, 2017).

4.1 Conservation and Efficient Use of Energy

- a) The Town of Chester encourages the conservation and efficient use of energy.

Efforts to improve energy efficiency and conservation are Chester's initial focus. Chester has identified the following implementation actions to achieve this policy.

In order to assist in implementing these actions, the Town will consider establishing an Energy Committee under 24 V.S.A. §§4433, 4464. The Town will also consider including priority municipal energy efficiency projects into the Capital Budget and Program. The Town may also consider establishing a fund to support appropriate municipal energy projects (e.g. capital projects, outreach efforts, incentives).

4.1.1 Encourage Conservation by Individuals and Organizations

Chester cannot control the use of energy by individuals and organizations. However, the Town can lead by example, serve as a resource, and encourage individuals and organizations to conserve and use energy efficiently. To do so, Chester identifies and promotes the following resources to provide guidance to individuals and organizations:

- a) Inform residents about energy efficiency programs through [Efficiency Vermont](#) and the Weatherization Assistance Program for low-income households through Southeastern Vermont Community Action ([SEVCA](#)) and encourage residents to participate.
- b) Work with partner organizations and Efficiency Vermont to offer workshops and educational opportunities to businesses on efficiency in new construction, retrofits, and conservation practices.
- c) Publicize local energy conservation projects to encourage future private and public activities.
- d) Utilize various methods to disseminate educational information, such as through Springfield Area Public Access (SAPA) TV, brochures, website materials, public events and digital media.
- e) Conduct outreach to service clubs.
- f) Identify large energy usage customers (including large businesses, manufacturing facilities, and schools) as a target audience and encourage participation in commercial and industrial efficiency programs through Efficiency Vermont.
- g) Encourage local business start-ups to conduct energy audits.

4.1.2 Promote Efficient Buildings

Heating buildings accounts for about 30% of all energy consumed in Vermont. Creating more efficient buildings can be achieved through weatherization and high-performance construction methods. Chester identifies the following to encourage efficient buildings:

- a) Promote the use of Vermont's residential building energy label/score.
- b) Promote the use of the [Residential Building Energy Standards](#) and [Commercial Building Energy Standards](#). To do so, the Zoning Office will distribute State energy code information to all applicants seeking a zoning permit for a structure that is heated or cooled. (Please note that the Town does not currently issue Certificates of Occupancy.)
- c) Promote benchmarking (using the free [EPA Portfolio Manager tool](#) and/or with assistance from Efficiency Vermont) for commercial buildings.
- d) Require that all residential Act 250 projects follow the residential stretch energy code.
- e) Require that all commercial Act 250 projects follow commercial stretch energy guidelines.
- f) Encourage new buildings to incorporate net-zero ready construction methods.
- g) Consider providing incentives (e.g. density bonuses) to developments that exceed the state's stretch energy code, or net-zero ready or net-zero demonstrated requirements, and that are located in an area identified as appropriate for growth.
- h) Promote building placement and location with [passive solar](#) and active solar in mind, and promote the use of [landscaping for energy efficiency](#).

Net-Zero: A construction method for buildings that generate as much energy as they consume. Also known as a zero-energy building.

Net-Zero Ready: A building constructed in a manner that, with subsequent on-site renewables installed, it can make as much energy as it uses.

Stretch Code: A building energy code that achieves greater energy savings than the base Residential Building Energy Standards (RBES). The Stretch Code is required for Act 250 projects and may be adopted by municipalities.

4.1.3 Promote Decreased Use of Fossil Fuels for Heating

Heating buildings accounts for about 30% of all energy consumed in Vermont and is the second largest contributor to greenhouse gas emissions. Home heating is heavily reliant on fossil fuels at this time. Solutions to address this situation involve high-efficiency heating system upgrades and fuel switching. Chester identifies the following to encourage using less fossil fuels to heat buildings:

- a) Promote the use of cold climate heat pumps with education/presentations in coordination with the Efficiency Vermont/electric utilities.
- b) Support the use of ground-source heat pump heating and cooling systems for new construction.
- c) Identify municipal buildings that would be good candidates for cold climate heat pumps, and develop a plan and schedule to add the heat pumps to those buildings.
- d) Encourage, promote, and incentivize advanced wood heating in certain situations by:
 - 1) Supporting the conversion of existing fossil fuel heating systems to wood;
 - 2) Encouraging local manufacturing of advanced wood heat technology with low-particulate emissions;
 - 3) Supporting development of wood fuel delivery infrastructure;
 - 4) Supporting development of sustainable forestry and procurement services;
 - 5) Expanding wood fuel processing facilities, encouraging bulk wood pellet delivery systems; and,
 - 6) Providing training and education on the benefits of heating with efficient, clean wood energy systems that have low-particulate emissions.
- e) Promote wood stove change-out programs that take older non-EPA certified stoves out of service and replace them with more efficient and lower emitting cord or pellet stoves.
- f) Identify municipal buildings that would be good candidates for wood pellet or chip heating and develop a plan and schedule to convert those buildings to wood heat.
- g) Explore opportunities for anaerobic digesters as appropriate.

4.1.4 Demonstrate the Municipality's Leadership by Example with Respect to the Efficiency of Municipal Buildings

Chester wishes to lead by example and demonstrate to individuals and organizations the benefits of building efficiency through the following efforts:

- a) Seek support and guidance from Efficiency Vermont for efforts to improve the efficiency of municipal buildings.
- b) Develop an inventory and conduct energy audits on municipal facilities, and develop a strategic plan to make energy efficiency and conservation upgrades.
- c) Assess the life cycle costs of potential energy improvements during design and construction planning. For example, investment in a new, efficient heating system may be more expensive up front, but more economical to operate over time.
- d) Incorporate weatherization/energy efficiency projects into the municipal Capital Budget and Program.
- e) Implement [low-impact development](#), [green stormwater infrastructure](#) practices, and/or strategic landscaping to shade buildings and reduce temperatures, thereby increasing overall efficiency.
- f) Develop policies so that if investing in new municipal buildings, municipalities strongly consider locations that will give people the option to get to those buildings without driving – for

example, by putting a new town hall near the post office or school or other village location instead of distant from the town center.

- g) Replace older municipal fossil-fired heating systems with high-efficiency, cold-climate heat pumps, geothermal heat, or advanced wood heating systems with low-particulate emissions (including wood-fired district heat), or considering switching over to biofuels.

4.2 Transportation

- a) The Town of Chester encourages the reduction of transportation energy demand and single-occupant vehicle use.
- b) The Town of Chester promotes the use of renewable or lower-emission energy sources for transportation (e.g. electric vehicles or hybrid vehicles).

Chester has identified the following implementation actions to help achieve these policies.

4.2.1 Encourage Increased Use of Public Transit

There is a public transit operator that has routes that serve Chester (i.e. Southeast Vermont Transit, a.k.a. "The Current"). Maximizing public transit ridership is a priority. Chester will implement the following actions to encourage public transit:

- a) Improve awareness of existing public transit services to residents and visitors.
- b) Plan and advocate for access to public transit, especially for Act 250 proceedings for larger developments.

4.2.2 Promote a Shift Away from Single-Occupancy Vehicle Trips

Public transit can meet the needs of some mobility needs, but additional efforts will be needed in order to reach the energy goals for reducing transportation energy use. Chester will work to encourage the following actions to encourage a reduction in single-occupant vehicle trips:

- a) Encourage people to re-think their trip before leaving home.
- b) Given the very fast internet speeds in Chester at this time, telecommuting is enabled. Evaluate if these internet speeds are available in all parts of town. Explore opportunities for shared work space that better enable residents to telecommute.
- c) Promote the Go Vermont webpage, which provides rideshare, vanpool, public transit and park-and-ride options.
- d) Support employer programs to encourage telecommuting, carpooling, vanpooling, walking and bicycling for employees' commute trips. Encourage employers to offer such programs and provide information on tax benefits that may be available for doing so.

4.2.3 Promote a Shift Away from Gas/Diesel Vehicles to Electric or Other Non-Fossil Fuel Transportation Options

To meet State energy goals, municipalities will need to contribute toward efforts to reduce the number of vehicle-miles traveled, and switch to renewable, non-fossil fuel transportation options. Chester has identified the following pathways to shift toward electric vehicles and other non-fossil fuel travel:

- a) Promote general awareness of the benefits of, and access to, electric vehicles and alternative-fuel vehicles.
- b) Promote and seek grants to fund the installation of DC fast-charging infrastructure at strategic locations along major travel corridors and in transit hubs such as park-and-ride locations.

- c) Plan, advocate for, and consider requiring the installation of Electric Vehicle charging infrastructure as part of new development or redevelopment, especially for developments subject to Act 250.
- d) Encourage the establishment of a local biofuel supplier.
- e) Support the development of additional refueling stations for alternative fuels for both private and public transportation fleets by sharing station development costs between public and private interests.

4.2.4 Facilitate the Development of Walking and Biking Infrastructure

Active transportation, such as walking and bicycling, offers significant health benefits and requires no outside energy resources. Chester encourages completing short trips by walking or bicycling instead of driving, by planning for safe and convenient infrastructure that support “Complete Streets Principles”. In order to do this, Chester has identified the following pathways:

- a) Update municipal road standards (for maintenance and new construction) to reflect [complete streets principles](#).
- b) Seek to implement bike and pedestrian improvement recommendations identified in the [Village Center Master Plan](#).
- c) Create a committee to create more opportunities to walk and bicycle around town.

4.2.5 Demonstrate the Municipality’s Leadership by Example with Respect to the Efficiency of Municipal Transportation

In order to meet the State energy goals, municipalities should lead by example and demonstrate to individuals and organizations the benefits of energy efficiency in transportation. Chester wishes to do so through the following ways:

- a) Establish policies that allow employees to telecommute.
- b) Install electric vehicle charging infrastructure on municipal properties.
- c) Purchasing plug-in hybrid or plug-in all-electric municipal and fleet vehicles when possible, and choosing the most fuel-efficient models if EVs are not practicable.
- d) Establishing minimum fuel efficiency standards for the purchase of new vehicles.
- e) Consider incentives for employees who commute using methods alternative to single occupancy vehicles, e.g. walking, biking, public-transit, and carpooling.
- f) When purchasing diesel fuel, the Town should use the highest biodiesel blend available without compromising the manufacturer’s engine warranty. All manufacturers fully warranty their engines with the use of B5, a blend of 5% biodiesel and 95% diesel.

4.3 Land Use Patterns and Densities

- a) The Town of Chester encourages maintaining the historic settlement pattern of compact downtowns and village centers surrounded by rural countryside in accordance with [24 V.S.A. §4302](#) and as described in the Chester Town Plan.
- b) The Town of Chester recognizes that compact development has a number of benefits, including furthering both State planning goals and State energy goals.
- c) The Future Land Use Map and corresponding descriptions in the Land Use Chapter of the Chester Town Plan encourages the types of land use patterns and densities that are likely to result in the conservation of energy.
- d) Zoning bylaws adopted by the Town generally enable the above land use patterns and densities.

- e) Chester's Village Center has been designated by the State Downtown Board under [24 V.S.A. Chapter 76A](#).

According to their Guidance, the DPS anticipates that if municipalities are actively participating in the above statutory frameworks for community planning, they will likely meet Pathways Standard 8.

Chester's Town Plan and various implementation methods, both regulatory and non-regulatory, combine to demonstrate a commitment to the above statutory planning framework. This plan documents what the municipality is doing in this area as it relates to encouraging the conservation of energy through land use development patterns and densities.

4.3.1 The Plan Includes Land Use Policies (and Descriptions of Current and Future Land Use Categories) that Demonstrate a Commitment to Reducing Sprawl and Minimizing Low-Density Development

According to the enhanced energy planning guidance, the reduction of sprawl and low-density development not only reduces energy consumption, but also can improve the local and regional economy.

- a) The Future Land Use Map and corresponding descriptions in the Land Use Chapter of the Town Plan generally calls for growth to occur in the Village areas and in discrete nodes of activity, including Gassetts and the special mixed use area (i.e. by the Armory Building). (See the Future Land Use Map and the corresponding language in the Land Use Chapter.)
- b) Chester's Future Land Use Map and Town Plan language also calls for maintaining the rural countryside in the areas surrounding the growth areas described in "a" above. (See the Future Land Use Map and the corresponding language in the Land Use Chapter.)
- c) Statements for access management and other provisions intended to control strip development along major roadways are included in both the Land Use Chapter and Transportation Chapter.

4.3.2 Strongly Prioritize Development in Compact Mixed-Use Centers

As indicated in the enhanced energy planning guidance, households within a compact, mixed-use center typically use less energy than those located in outlying areas. The energy savings are realized through reduced vehicle-miles-traveled and generally smaller homes, which require less energy to heat and cool. Transportation energy use can be further reduced by locating services such as shopping or daycare within walking or biking distances to the places where people work and live. This enables people to either choose an alternative to driving a single-occupancy vehicle or to significantly reduce the length of their drive. Chester chooses to encourage this by:

- a) Maintaining Village Center Designation, and improving the awareness of property owners about the tax credit opportunities to help pay for improvements to eligible buildings within Chester's Village Center.
- b) Coordinating with Southeast Vermont Transit (The Current) and the Go Vermont program to discuss options to promote car-sharing and public transit services.
- c) Continuing to actively work on making sidewalk improvements based on the recent Village Center Master Plan.

4.4 Statement of Policy on the Development and Siting of Renewable Energy Resources

The heating, transportation and conservation targets and pathways combined are not sufficient to meet the 90% by 2050 energy planning goal. The Long Range Energy Alternatives Planning (LEAP) model also

assumes the purchase of additional out-of-state renewable energy will help to reach this goal; however, that is also not sufficient to meet the energy goals. New local renewable energy generation is also needed in order to achieve the ambitious “90 by 50” energy goal. The following sections discuss how the municipality wishes renewable energy generation to take place in Chester.

4.4.1 Evaluate Existing Renewable Energy Generation

According to existing data, there are 38 known renewable energy generation facilities in Chester as of November 2017⁴, as summarized in Table 7. Existing facilities nearly amount to 2.17 MW of installed capacity. In order to more easily compare existing facilities with the targets for new renewable energy needs, generation output was estimated in MWh based upon the conversion factors found in the Guidance for regional enhanced energy plans.

Type	Number of Sites	Installed Capacity (MW)	Est. Output (MWh)
Solar	38	2.17	2,667
Wind	0	0	0
Hydro	0	0	0

4.4.2 Analyze Generation Potential from Preferred Sites and/or Potentially Suitable Areas

An analysis of renewable energy generation potential was conducted for Chester by the SWCRPC. This consisted primarily of an analysis of existing and available GIS mapping data based upon the guidelines established by the DPS for enhanced energy planning. Table 8 below summarizes the findings of this analysis.

Table 8: Potential Renewable Energy Generation⁵

Type	Capacity (MW)	Generation Output (MWh)
Roof-top Solar	3.1	3,802
Ground-mounted solar	517.2	634,306
Wind	854.6	2,620,326
Hydro	0.016	56
Total	1,375	3,258,490

Based upon this analysis, there is significant potential to generate power from renewable sources in Chester, primarily through ground-mounted solar and wind. There is limited potential to generate hydropower from the three existing dam sites that do not generate power at this time. The potential for rooftop solar projects is limited. Without ground-mounted solar and/or some forms of wind, there is not adequate generation potential from hydro and rooftop solar to meet the “90 by 50 goal” alone.

4.4.3 Identify Sufficient Land for Renewable Energy Development to Reasonably Reach the 2050 Targets

Table 9 summarizes Chester’s targets for renewable energy generation⁶. There is more than adequate land area in Chester that has solar potential to meet our 2050 renewable energy target of 24,015 MWh, which is the equivalent of approximately 19.58 MW of ground-mounted solar at the installed capacity.

⁴ Vermont Energy Dashboard (February 2017)

⁵ Derived from GIS mapping analysis (SWCRPC, 2017)

⁶ SWCRPC, derived from Regional Shares of In-State Generation Target (DPS, 2017)

The guidance assumes 8 acres of land is generally needed to support 1 MW of solar. This would amount to about 157 acres of land to meet this target. This represents about 4.3% of the total land area in Chester that is estimated to have potential to generate solar power.

Table 9: Renewable Energy Generation Targets ⁹			
Renewable Energy Generation	2025	2035	2050
Chester Targets (in MWh)	6,004	12,008	24,015

4.4.4 Ensure that Local Constraints do not Prohibit or Have the Effect of Prohibiting the Provision of Sufficient Renewable Energy to Meet State, Regional or Local Targets

These constraints have been analyzed, and the Town does not believe that these constraints prohibit or have the effect of prohibiting sufficient renewable projects needed to meet the state, regional or local energy goals.

The following resources are not appropriate locations for renewable energy projects and are hereby excluded from the potential wind and solar sites as depicted on the map. The following are consistent with the “known constraints” as described in the DPS mapping guidance.

- a) Vernal pools with a surrounding 50 foot buffer;
- b) Department of Environmental Conservation (DEC) river corridors;
- c) Federal Emergency Management Agency (FEMA) floodways;
- d) State significant natural communities and rare, threatened and endangered species;
- e) National wilderness areas; and,
- f) Class 1 and Class 2 wetlands.

The following represent constraints that will likely require mitigation and which may prove a site unsuitable after a site-specific study has been conducted based upon state, regional or local policies that are adopted and currently in effect. Points a) through g) below are consistent with the “possible constraints” as described in the DPS mapping guidance.

- a) Agricultural soils (NRCS-mapped prime agricultural soils, soils of statewide importance or soils of local importance);
- b) Act 250 agricultural soil mitigation areas;
- c) FEMA special flood hazard areas (floodplain);
- d) Protected lands (state fee lands and private conservation lands);
- e) Deer wintering areas;
- f) ANR conservation design highest priority forest blocks; and,
- g) Hydric soils.

4.4.5 Statements of Policy to Accompany Maps

Chester hereby promotes the development of renewable energy generation in order to achieve the energy goals and targets as established in this plan. The following statements of policy apply to renewable energy projects:

- a) All new development should be sited to accommodate solar.
- b) Chester encourages rooftop solar projects.
- c) Chester encourages residential-scale wind turbines.
- d) Renewable energy projects, including ground-mounted solar projects of 15 KW and bigger, must not be located in the following areas:
 - 1. Vernal pools with a surrounding 50 foot buffer;
 - 2. Commercial scale projects in the river corridors as most recently mapped by the Vermont Department of Environmental Conservation (DEC);
 - 3. FEMA floodways;
 - 4. State significant natural communities and rare, threatened and endangered species;
 - 5. National wilderness areas;
 - 6. Class 1 and Class 2 wetlands; and,
 - 7. Within 50 feet of all streams and Class 1 and 2 wetlands.
- e) All ground-mounted solar projects must meet or exceed the setback standards in 30 V.S.A. §248(s).
- f) Any new biomass facility and all ground-mounted solar projects of 150 kW or greater that are within view of public roadways (i.e. state highways, US routes, and Class 1, 2 and 3 town highways) must provide plantings that blends the project with its surroundings. This shall consist of naturalistic plantings using a mix of native plants and avoid introducing [invasive species](#).
- g) The applicant must replace any dead or diseased vegetation serving as part of the landscape mitigation measures throughout the life of the project or until the project ceases commercial operation.
- h) In accordance with PUC Rule 5.900, the applicant is required to provide a plan for the site to be adequately decommissioned at the time when the project ceases commercial operation. This should involve the removal of all parts of the project from the site including, but not limited to, the solar panels or wind turbine, inverters, metal framework that supports the solar panels, fencing, control invasive species, and any necessary site recovery as stipulated in the permit.

Undue Adverse Effect (Impact)

An adverse impact that meets any one of the following criteria:

- (1) Violates a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area;
- (2) Offends the sensibilities of the average person (i.e. it is offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area); or,
- (3) Fails to take generally available mitigating steps that a reasonable person would take to improve the harmony of the proposed project with its surroundings.

This definition is based upon Vermont case law. The term undue adverse effect is used in accordance with 30 V.S.A. §248.

Wind Turbine Categories

Residential-scale – wind turbines that are up to 30 meters (or 98 feet) tall, measured at the hub, or the center of the wind turbine blades.

Community-scale (sometimes referred to as commercial-scale) – wind turbines that are up to 50 meters (or 164 feet) tall, measured at the hub.

Utility-scale – wind turbines that are usually 70 meters (or 230 feet) tall or greater, measured at the hub.

Plants for site reclamation and restoration after decommissioning an energy generation site should be chosen with plant communities in mind, and considering the original composition of the community before disturbance. Consideration of soils, hydrology, solar access and physiographic region should guide plant selection. Plants should include canopy, mid-story, and woody and herbaceous understory layers. All plants should be native to Vermont. Publications to refer to include:

Mixed Hardwood Forests:

http://dec.vermont.gov/sites/dec/files/wsm/lakes/Lakewise/docs/lp_naturalcomm.pdf

Lacustrine, Riparian and Wetland Areas:

http://dec.vermont.gov/sites/dec/files/wsm/lakes/Lakewise/docs/pl_native-veg.buffer-manual.1994.pdf

General Information for determining Plant Community to restore:

<https://www.uvm.edu/rsenr/sal/vbp/VBP.pdf>

<http://vtfishandwildlife.com/node/200>

<http://vtfishandwildlife.com/learn-more/landowner-resources/liep-invasive-species-program/terrestrial-invasive-plant-resources/native-plant-sources>

- i) Proposed renewable energy facilities must not have undue adverse impacts on significant wetlands, significant wildlife habitat, wildlife travel corridors/habitat connectivity, stormwater, water quality, flood resiliency, important recreational facilities or uses, scenic resources identified in this plan, or inventoried historic or cultural resources.
- j) Proposed renewable energy facilities must not result in forest fragmentation or perpetuate invasive species.
- k) For all utility-scale wind (i.e. hub height of 70 meters/230 feet) and commercial-scale wind projects (i.e. hub height of 50 meters/164 feet hub height), the applicant must demonstrate that the proposal was evaluated and that reasonable mitigation was considered with respect to the following criteria:
 - 1. Operational noise, to be measured at the property line, will result in noise levels consistent with state standards.
 - 2. Avoid or minimize “shadow flicker” through careful project siting, planting trees or other methods.
 - 3. Avoid or minimize adverse impacts to significant wildlife habitat and wildlife travel corridors, including applicable terrestrial, aquatic and aerial species (e.g.

Shadow Flicker

A flickering effect caused when rotating wind turbine blades periodically cast shadows, such as through the windows of adjacent homes. Shadow flicker is considered by some individuals as a nuisance and may cause headaches. No more than 30 hours per year is commonly used as a limit to reduce nuisance complaints.

migratory, resident and breeding bird and bat populations).

4. Avoid or mitigate safety hazards in the vicinity of the project area (i.e. ice shedding or ice throw hazards, blade throw hazard, and tower fall zones).

4.4.6 Maximize the Potential for Renewable Generation on Preferred Locations

Preferred locations include specific areas or parcels that are specifically identified to indicate preferred locations for siting a generator or a specific size of type of generator. Identifying preferred sites informs the community where renewable generation is desired. The identification of such sites can help to streamline the permitting process.

Preferred sites for Chester include:

- a) Rooftops;
- b) Parking lots;
- c) Brownfield sites; and,
- d) Disturbed portions of extraction sites (i.e. gravel pit, quarry).

4.4.7 Demonstrate the Municipality's Leadership by Example

Chester will lead by example by working with partner organizations to identify opportunities for local renewable energy generation that benefits the community and furthers the goals and policies of this plan.

Chapter 10 - Economic Development

The purpose of this Chapter is to describe the current local economic conditions, articulate the desired future economic conditions, and identify municipal efforts that will foster the desired economic growth in Chester. This section is informed by comments received at the public economic development forum held on February 1, 2016.

Present Economic Conditions

Chester is a quintessential Vermont town, with a charming village center that is surrounded by a picturesque rural landscape. Current economic activity is generally concentrated within a few parts of town, including:

1. Traditional commercial center of the village comprised of three sub-sections:
 - a) The Green features a very dense cluster of traditional, multi-story buildings that surround the common located on Main Street (VT Route 11). This is the traditional heart of the community's economic activity. There are a variety of restaurants, stores and inns in this area.
 - b) The Depot area located along Depot Street (VT Route 103) and surrounding the train station exhibits a moderately dense mix of housing, commercial operations, and civic buildings. Economic activity currently involves uses such as antique stores, hair dresser, hardware store, feed store, Lisai's Market, and home-based businesses.
 - c) Stone Village comprises an area along North Street (VT Route 103) known for historic stone buildings. Uses currently include a mix of residences, home-based businesses, and a variety of small-scale retail operations that sell antiques, art, produce or furniture.
2. Elm Street comprises an area that is located along the Green Mountain Railroad and exhibits a mix of commercial or industrial uses, along with some residences. Present economic activity includes businesses that involve such things as screen printing, fuel distribution, equipment and power-sports retail, vehicle maintenance, state highway maintenance, insulation, and propane dealer.
3. The southern gateway area includes the locations along VT Route 103 South in the vicinity of the Green Mountain Union High School. This area has experienced more recent commercial development and includes a variety of businesses including Drew's All Natural, arts and crafts retail, antique stores, restaurants, and a credit union. This area serves as a gateway between the village and the rural sections of VT Route 103 toward Rockingham and I-91.
4. Located near the intersection of VT Route 11 and Balch Road, the area surrounding the former armory building represents a very small cluster of commercial uses, including tourist lodging. A new light manufacturing business is proposed for the former Chester Armory building.
5. Gassetts, located around the intersection of VT Routes 10 and 103, represents a small, moderately-dense cluster of commercial and residential buildings. Non-residential uses in Gassetts include a local foods market and retail of stone and masonry materials.

The remainder of the town is primarily rural in character, and current economic activities in these rural areas involve such things as farming, forestry, home occupations, inns, and small-scale antique stores. In addition, many residents commute to jobs in other towns. This is discussed more in the next section. A regional economy that provides good jobs within a short drive from Chester is highly valuable.

Economic Profile

A variety of jobs are available in the larger geographic area (i.e. Chester, Springfield, Ludlow, Bellows Falls and other towns in the vicinity), including high tech, automotive, food manufacturing, food distribution, education, health care, recreation, tourism, and school and governmental services. Major employers in Chester include

Newsbank, Drew's All Natural, municipal government and the school system. The small businesses that populate Chester's economic growth areas are the lifeblood of an economically successful community. Chester's economy relies heavily upon tourism to support the many restaurants, inns and many of the retail shops (e.g. antiques, arts, crafts and other tourist-oriented merchandise).

The following tables summarize Chester's economy based upon the most recent data made available through the Longitudinal Employer-Household Dynamics (LEHD) dataset from the U.S. Census Bureau. According to this information, Chester employment for 2013 involved a total of 1,619 primary jobs¹. Approximately 11% of those jobs reflect Chester residents who work in town, 56% involve Chester residents commuting to a job in another town, and 33% represent people who work in Chester but live elsewhere. Common job locations for Chester residents include Chester, Springfield, Ludlow, Londonderry and Rockingham.

Table 10.1 summarizes details of the jobs that are located in Chester. Table 10.2 is based on jobs that Chester residents commute to in other towns.

¹ The "primary jobs" figure does not include second jobs. This LEHD dataset under-reports self-employed jobs.

Table 10.1: Summary of Chester Jobs (2013)

Total Primary Jobs			717
Jobs by Earnings	Count	Share	
\$1,250 per month or less	156	21.8%	
\$1,251 to \$3,333 per month	281	39.2%	
More than \$3,333 per month	280	39.1%	
Key Sectors	Count	Share	
Information	159	22.2%	
Educational Services	156	21.8%	
Accommodation and Food Services	76	10.6%	
Public Administration	71	9.9%	
Other Services (excluding Public Administration)	42	5.9%	
Retail Trade	41	5.7%	
Construction	39	5.4%	
Manufacturing	31	4.3%	
Jobs by Worker Educational Attainment	Count	Share	
Less than high school	40	5.6%	
High school or equivalent, no college	166	23.2%	
Some college or Associate degree	182	25.4%	
Bachelor's degree or advanced degree	205	28.6%	
Educational attainment not available (workers aged 29 or younger)	124	17.3%	
Home Locations	Count	Share	
Chester town (Windsor, VT)	184	25.7%	
Springfield town (Windsor, VT)	95	13.2%	
Rockingham town (Windham, VT)	35	4.9%	
Ludlow town (Windsor, VT)	29	4.0%	
Andover town (Windsor, VT)	28	3.9%	
Westminster town (Windham, VT)	25	3.5%	
Cavendish town (Windsor, VT)	25	3.5%	
Weston town (Windsor, VT)	22	3.1%	
Londonderry town (Windham, VT)	17	2.4%	
Weathersfield town (Windsor, VT)	13	1.8%	
All Other Locations	244	34.0%	

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2013).

Table 10.2: Summary of Chester Resident's Jobs (2013)

Total Primary Jobs			1,086
Jobs by Earnings	Count	Share	
\$1,250 per month or less	297	27.3%	
\$1,251 to \$3,333 per month	386	35.5%	
More than \$3,333 per month	403	37.1%	
Key Sectors	Count	Share	
Health Care and Social Assistance	171	15.7%	
Educational Services	151	13.9%	
Manufacturing	133	12.2%	
Accommodation and Food Services	131	12.1%	
Retail Trade	125	11.5%	
Public Administration	71	6.5%	
Construction	51	4.7%	
Wholesale Trade	38	3.5%	
Jobs by Worker Educational Attainment	Count	Share	
Less than high school	72	6.6%	
High school or equivalent, no college	273	25.1%	
Some college or Associate degree	291	26.8%	
Bachelor's degree or advanced degree	228	21.0%	
Educational attainment not available (workers aged 29 or younger)	222	20.4%	
Work Destination	Count	Share	
Chester town (Windsor, VT)	184	16.9%	
Springfield town (Windsor, VT)	171	15.7%	
Ludlow town (Windsor, VT)	93	8.6%	
Londonderry town (Windham, VT)	55	5.1%	
Rockingham town (Windham, VT)	50	4.6%	
Weston town (Windsor, VT)	41	3.8%	
Westminster town (Windham, VT)	37	3.4%	
Cavendish town (Windsor, VT)	30	2.8%	
Brattleboro town (Windham, VT)	27	2.5%	
Hartford town (Windsor, VT)	27	2.5%	
All Other Locations	371	34.2%	

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2013).

According to a comparison of American Community Survey data, median household income in Chester was estimated as \$47,656 in 2013, which represents a 12% increase since 2009. This 2013 income for Chester lags behind the median household incomes for both Windsor County at \$52,460 and the State of Vermont at \$54,267 (see Table 10.3). The 2015 median income of households that are served by the municipal water system was \$33,480².

According to estimates from the American Community Survey, the unemployment rate in Chester was 4.8% in 2013. The poverty rate was 8% in 2013 based upon the same data source.

Table 10.3: Household Income 2005 - 2013

	Median Household Income		
	2005-2009	2009-2013	% Change
Vermont	\$51,282	\$54,267	5.8%
Windsor County	\$51,066	\$52,460	2.7%
Andover	\$51,667	\$43,750	-15.3%
Baltimore	\$49,792	\$46,875	-5.9%
Cavendish	\$42,130	\$51,667	22.6%
Chester	\$42,535	\$47,656	12.0%
Ludlow	\$44,276	\$39,850	-10.0%
Reading	\$57,100	\$58,125	1.8%
Springfield	\$40,290	\$44,149	9.6%
Weathersfield	\$58,846	\$62,468	6.2%
West Windsor	\$69,722	\$70,250	0.8%
Windsor	\$49,231	\$40,472	-17.8%

Source: Source: 2005-2009 & 2009-2013 American Community Survey, US Census Bureau

Existing Programs and Assets

Chester has many outstanding assets that make it an attractive place to live and work. The quaint, charming village surrounding the Green is one of the key assets as it forms the center of the community's business district and exhibits an attractive "post card" quality. Other community assets identified during the 2016 public forum include the following:

- ✓ Excellent quality of life;
- ✓ Attractive, walkable village;
- ✓ Historic architecture;
- ✓ Very fast internet speeds;
- ✓ Good proximity to jobs in surrounding communities;
- ✓ Chester is well known for arts and antiques;
- ✓ Strong existing businesses;
- ✓ Traffic volumes along VT Route 103;
- ✓ Large number of skilled workers;
- ✓ Proximity to tourist destinations;
- ✓ Outdoor recreational assets;
- ✓ Successful community events (e.g. Fall Festival).

Programs that currently support local or regional economic development efforts include the following:

- ✓ Chester Community Alliance, Inc.:
 - ✓ Chester Economic Development Committee;
 - ✓ Chester Townscape Committee;
 - ✓ Green Mountain Festival Series Committee;
- ✓ Okemo Valley Regional Chamber of Commerce;
- ✓ Springfield Regional Development Corporation;
- ✓ East Central Vermont Economic Development District;
- ✓ Revolving Loan Fund;

² From a household income survey conducted by the Vermont Rural Water Association for the Town of Chester

✓ Village Center Designation.

Desired Future Economic Conditions

Chester's vision is for a thriving, equitable and resilient economy that strengthens and revitalizes our village, preserves and honors our history and working landscape, maintains the special charm that is what Chester is currently known for, and improves the socio-economic well-being of Chester residents.

Village Center

In 2013, the Vermont Downtown Board approved the designation of Chester's Village Center. The designated Village Center boundary is shown in Figure 10.1. Designation under this program does not create any regulatory requirements for buildings within this area. This program is intended to recognize local revitalization efforts and provide incentives to help further local initiatives to improve the Village Center. Benefits of designation are summarized below:

- 10% Historic Tax Credits;
- 25% Facade Improvement Tax Credits;
- 50% Code Improvement Tax Credits;
- 50% Technology Tax Credits;
- Priority Consideration for State Grants;
- Priority Consideration by State Building And General Services (BGS);
- Eligibility for designation of a Neighborhood Development Area (NDA) within ¼ mile of the Village Center.

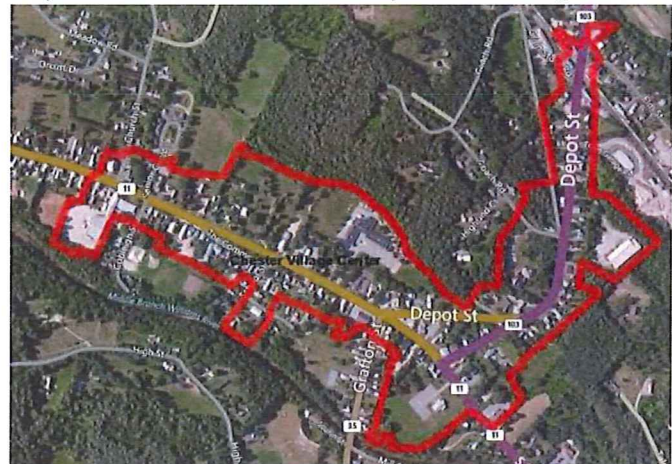


Figure 10.1: Chester's Village Center Boundary

Renewal of this designation is due by July 2021.

As described earlier in this Chapter, the Village Center represents the traditional commercial center of the community. The Green and the Depot form the basis of this area as shown in Figure 10.1. This area is the primary location where economic growth is to be focused. This area is served by an extensive sidewalk network, buildings are set close to the roadway, and historic buildings and related infrastructure form a pleasant walking environment. Future investments in this area are expected to be in keeping with smart growth principles and to maintain or enhance the existing charm of the built environment. This is where retail, restaurants, professional offices and other economic activities typically located within Vermont community centers are desired.

In recent years, the Town has been making investments to the infrastructure in this area to support the desired future conditions. Additional investments in this regard may be desired to improve signage, parking, sidewalks, pedestrian crossings, public restrooms, public transportation and other strategic improvements. Particular attention to making enhancements, such as on-street parking and creating inviting public outdoor spaces, will help to make the Green an attractive destination for tourists and business investment.

Smart Growth Principles:

As defined in State Statutes, this term means growth that:

- Maintains the historic development patterns;
- Develops compact mixed-use centers at an appropriate scale;
- Supports a diversity of viable businesses in village;
- Promotes walking and bicycling;
- And as described in more detail under [24 V.S.A. §2791\(13\)](#).

The Village Center designation achieves the following goals:

- *Furthering the intent of the Land Use Chapter – The Town Plan identifies the need to revitalize village commercial, residential and mixed use areas. Continued designation will focus additional resources to help these areas thrive, including the ability to have tax credits, a special assessment district and priority consideration for several grant programs.*
- *Preserving significant historic, architectural, and cultural heritage – The access to historic tax credits and code improvement tax credits will support redevelopment of older and historic properties, preserving the historic character of the Village Center.*
- *Continued support of transportation improvements – The Town has benefited from the priority consideration for Municipal Planning Grants, Historic Preservation Grants, Agency of Transportation Grants, recreation grants and other state funding opportunities. Some of the projects that were spearheaded by the 2017 Village Center Master Plan and have been funded through these opportunities include:*
 - Depot Street Sidewalk Design and Construction
 - Church Street Scoping Study
 - School Street Pocket Park
 - Wayfinding Plan
 - Signage Design
 - Unified Development Zoning Bylaws Rewrite
 - Marketing Plan

The Village Center Master Plan is a key element for revitalizing the village area that ties in with the Village Center designation. Funded through the Strong Communities Better Connections Grant, this document was developed with significant community input and presents specific initiatives to move Chester forward while still preserving the historic character of the area.

Elm Street

This area is served by the municipal water system and partially served by the municipal sewer system. Elm Street connects to two major highways (i.e. VT Route 11 and VT Route 103) and it is adjacent to the Green Mountain Railroad. Additional commercial and light industrial uses are desired in this area. Such businesses are desired at a scale that is generally consistent with the existing non-residential uses in this area, and to be compatible with adjacent land uses with respect to minimizing impacts related to traffic, noise, smell and other routine performance criteria. Land uses that take advantage of the railroad are encouraged.

Southern Gateway

This area has been developed with a mix of commercial and manufacturing uses in recent years. This commercial area is separated from the village by a residential area that runs along VT Route 103 between Mountain View and Pleasant Street.

When the town was working to develop the VT Route 103 Corridor Management Plan in 2009, concern was raised over the emerging strip development patterns in this area. Since this area forms the initial

perception of travelers entering the Chester village area from the south along VT Route 103, its appearance matters significantly for a tourist-oriented economy. The corridor plan explored alternative land use patterns that could extend the village feel through this area. Additional commercial uses are desired in this area, but only in a way that helps to transform this currently automobile-oriented area to look and function more like a village. This would include site design techniques such as traditional village settlement patterns, creating a walkable environment, parking lots placed to the side or rear of buildings, avoiding “big box” building designs, sound access management techniques and other considerations as more thoroughly described in the VT Route 103 Corridor Management Plan.

In order to facilitate this development, the Town should investigate infrastructure improvements to encourage these desired future land use patterns. This might include traffic calming by the High School, installing gateway treatments (e.g. welcome signs, landscaping), constructing a sidewalk or walking path to connect to the High School, and other enhancements.

Armory Building Area

The area surrounding the Chester armory building near the intersection of VT Route 11 and Balch Road is served by municipal water services, but not municipal sewer. This small area is where a mix of commercial and light industrial uses are desired at a lower-density scale as allowed for in the Adaptive 3 District per the Unified Development Bylaws.

Gassetts

The density of development in the hamlet of Gassetts is limited by soil conditions since it is not served by municipal water or sewer services. A low- to moderate-density of residential and non-residential uses are desired in this area as allowed for under the *Unified Development Bylaws*.

Rural Working Landscape

The remainder of Chester is generally rural in character where farming and sustainable forestry activities are desired. In striving to pursue healthy community and local food initiatives, Chester wishes to encourage the local production of farm-fresh foods and value-added farm products in order to improve access to fresh and healthy foods. There may be opportunities to pursue local businesses that tap into the growing farm-to-table and natural food, hormone-free or GMO-free food initiatives.

Facilitating a working landscape for sustainable forestry and local foods production is important, but Chester also wishes to build upon our excellent outdoor recreational assets (i.e. The Pinnacle, trails) as an integral part of our economic development strategies.

Home-Based Occupations and Businesses

Home-based jobs are encouraged throughout town and particularly in the rural areas as a positive opportunity to diversify the local economy and increase employment. Home-based occupations refers to a resident working out of a minor portion of their home. High-fast internet speeds in Chester encourage telecommuting. Home-based businesses may involve up to four employees. In the Unified Development Bylaws, home occupations are approved under permitted use review and home businesses require conditional use review.

Strategies to Foster Desired Economic Conditions

In order to achieve these desired future economic conditions, the Town of Chester wishes to work with partner organizations on the following strategies:

1. Promote a business-friendly attitude for new and existing businesses that are in keeping with the goals of the Town Plan.
2. Enhance marketing efforts through a variety of means, such as working with partners, enhanced website, and increased social media presence.
3. Promote existing events and expand community events and activities.
4. Promote additional creative economy-based businesses, such as artisans and craft persons, in order to expand on the current business offerings. Consider creating marketing materials to highlight excellent local and regional assets, such as a series of maps or visitor guides that highlight local artisans, historical points of interest, and/or great restaurants in the area.
5. Explore incentives that the Town may be able to provide to help bring businesses into Chester, which reinforce the scale, character and economy of the community.
6. Conduct a study to determine if the availability of housing is adequate for local employees , presently and in the future.
7. Work with educational institutions to better prepare high school graduates for the work force and to provide work force training opportunities for those seeking new careers.
8. Coordinate with Southeast Vermont Transit, which operates the Current, in order to improve the marketing of existing bus service and identify enhancements to improve access to quality work opportunities.
9. Maintain Village Center Designation in order to help implement village revitalization efforts called for in this Town Plan. Consider expansion of the existing designated Village Center boundary in order to include more of the center of Chester.
10. Consider applying for Neighborhood Development Area Designation in order to incentivize the creation of compact, walkable neighborhoods that attract more people and business to our existing Village Center.
11. Install wayfinding signage in order to direct travelers along VT Route 103 toward the Green.
12. Improve traffic circulation, sidewalks, crosswalks and parking around the Green.
13. Design and construct streetscape enhancements that will help to make the Green a destination, such as replacing pavement with pavers, increasing sidewalk width to accommodate outdoor seating, outdoor lighting and planting street trees.
14. Create an attractive gateway along VT Route 103 through welcome signs, landscaping, traffic calming or other design techniques.
15. Design and construct a sidewalk or path and streetscape improvements along the VT Route 103 South commercial area in order to transform and improve the appearance of the area.
16. Develop facilities appropriate in scale and design for Chester that facilitate ridesharing and improve bus service options (e.g. park-and-ride lot, bus shelters).
17. Evaluate economic growth areas in Chester and identify possible additional sites if the existing options are found not to be adequate.
18. Coordinate with surrounding towns and regional partners to promote a strong and vibrant regional economy that benefits both Chester and the region.

Economic Goals

1. To foster a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards.

2. To promote economic growth that strengthens and revitalizes our village, preserves and honors our history and working landscape, maintains the special charm that is what Chester is currently known for, and improves the socio-economic well-being of Chester residents

Economic Policies

1. Economic growth is desired within the Village Center, Elm Street, Southern Gateway, and in the Adaptive 3 District as described in Chapter 10.
2. The Town of Chester will strive to maintain a business-friendly approach to economic development and the associated local permitting process.
3. The expansion of existing businesses that support the goals and aspirations of the community is encouraged.
4. New business establishments are desired. Such businesses will contribute to furthering the goals of this Town Plan and shall be consistent with the Desired Future Economic Conditions as described in Chapter 10.
5. Applications for new businesses and industrial enterprises will demonstrate how they further the community's desire to improve the quality of life, contribute toward the existing charm of the village, and maintain or improve the viability of the local tourist-based economy.
6. Home occupations and home-based businesses are encouraged as long as they are appropriate to adjoining land uses, and do not adversely affect air, water or scenic resources or cause noise that is offensive to surrounding neighbors.

Chapter 6 Appendix A: Enhanced Energy Data Summary

Chester



Population Table A-1

Total Population ⁱ (2015):	3,110
Proj. Annual Avg. Growth Rate ⁱⁱ :	0.0
Population Density:	55.6 persons/ square mile



Households Table A-2

Owner-Occupied Units ⁱⁱⁱ :	1,040
Renter- Occupied Units ⁱⁱⁱ :	362
Total Households ⁱⁱⁱ :	1,793
Avg. Household Size ⁱⁱⁱ :	2.25 people/ household



Businesses^{iv} Table A-3

Total businesses in Chester:	129
Employees working in Chester:	909
Average wage:	\$37,378



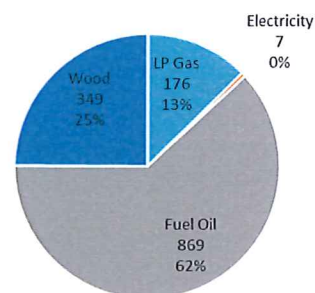
Heating Table A-4

Residentialⁱ (see figure)

Businesses^v:

Estimated avg. building space:	5,398 sq. ft.
Total energy use:	33.8 billion BTUs
Estimated total annual cost:	\$806,005
Avg. annual cost per business:	\$6,248

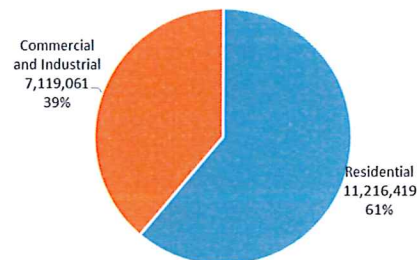
Home Heating Fuels in Chester (2015)



Transportation Table A-5

Number of vehicles:	2,694
Estimated vehicle miles traveled:	35.5 million
Estimated gal. fuel used per year:	1.9 million
Estimated fuel cost per year:	\$4.4 million
Residents driving alone to work:	71%
Average commute time:	21 minutes

Electricity Usage by KWh in Chester



Electricity Use Table A-6

Electricity Usage in 2015 ^{vi}	(see figure)
Avg. Residential Usage:	6,689 KWh
Total Usage (2014-2016):	↑ 254,657 KWh ↑ 1.4%



Energy Generation Table A-7

Existing Renewable Energy Generation

Solar	38 sites	2.17 MW	2,666.6 MWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets^{vii}

2015 (Baseline)	2,666.6 MWh
2025	6,004 MWh
2035	12,008 MWh
2050	24,015 MWh

Potential for Renewable Energy Generation^{viii}

Rooftop Solar	3.1 MW	3,802 MWh
Ground-Mounted Solar	517.2 MW	634,306 MWh
Wind	854.6 MW	2,620,326 MWh
Hydro	0.016 MW	56 MWh

ⁱ U.S. Census Bureau, American Community Survey (ACS) 2011-2015

ⁱⁱ Based on Scenario B population projections for 2030 (VT ACCD, 2013)

ⁱⁱⁱ U.S. Census Bureau, Decennial Census (2010)

^{iv} Vermont Department of Labor Statistics (2015)

^v Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.

^{vi} Efficiency Vermont (2017)

^{vii} SWCRPC

^{viii} Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Chapter 6 Appendix B: Energy Targets

The standards that the Department of Public Service has established for energy targets must be met if this Plan is to receive substantial deference in Section 248 energy siting proceedings. Chester is utilizing targets (or scenarios) developed using the Long-Range Energy Alternatives Planning (LEAP) Model and provided to Chester by the SWCRPC. The background for the targets are described in more detail in the draft *2017 Southern Windsor County Regional Energy Plan*. The purpose of the targets, when combined with the analysis presented in the previous section, are intended to provide an overview of existing energy use and projections for the pace of change that is needed over the next three-plus decades. **The targets simply demonstrate that, in order to meet 90% of Vermont's energy need from renewable sources by 2050, a significant amount of change will be needed in the forms of energy conservation, behavior modification, and development of new local renewable energy generation.**

In order to meet the 90% by 2050 goal, total energy use in southern Windsor County will need to decrease by 50%. Primarily this must involve a vast reduction in the use of non-renewable fuels, such as gasoline and fuel oil. The LEAP model relies on a number of generalized assumptions to reach the 90% by 2050 goal, such as:

- Electricity use today is about 20% of total energy consumption, but it will increase to 35% of total consumption in 2050;
- The use of non-renewable fuels will be vastly reduced from about two-thirds today to about 10% by 2050;
- Renewables will increase from about 18% now to more than half by 2050. This involves wood consumption remaining relatively constant and biodiesel usage increasing substantially.

Please note that the above section is intended to summarize the assumptions made for this LEAP model. In the intervening years between 2018 and 2050, there are likely to be technological advances that may help us to achieve our energy goals and targets in ways that we cannot anticipate today.

B.1 Electricity

Targets for electricity are mixed. Significant efforts to reduce electricity usage through conservation and efficiency measures will be needed. However, the LEAP model utilizes the increased use of electricity to achieve the goal for both transportation (i.e. electric vehicles) and heating sectors (i.e. cold-climate heat pumps). See Figure 3 below.

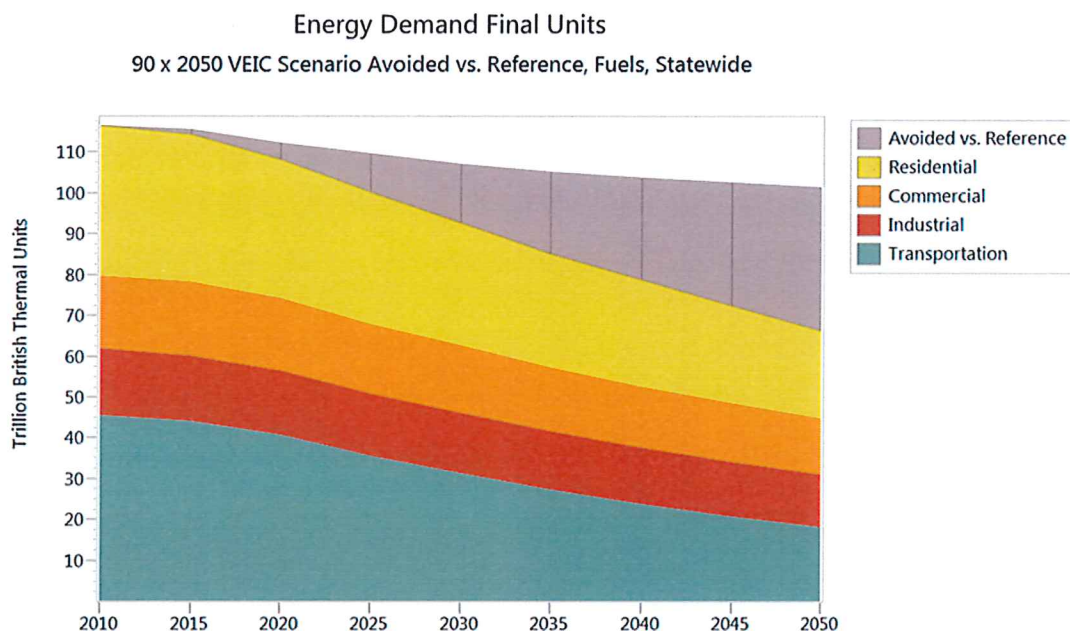


Figure 3: Vermont must significantly reduce total energy use by 2050 to be successful in implementing the goals of the Comprehensive Energy Plan. The LEAP model referenced in this Plan calls for substantial reductions in energy use by residences and transportation. The line above the grey area represents projections for if we do nothing else to reduce energy demand. The grey area itself represents efforts needed to reduce total energy demand.

Reducing electricity demand through energy conservation and efficiency measures will involve taking advantage of programs offered by Efficiency Vermont, utilization of high-efficiency/energy star appliances, LED lighting upgrades, and other efforts at energy demand management.

Electricity targets also include the development of additional renewable energy generation. The LEAP model includes assumptions for additional imported renewable energy from sources such as Hydro Quebec. However, local generation is also required. Targets for local renewable generation are summarized below in Table 1 and discussed in more detail in the renewable siting discussion under the Implementation Actions section of the Energy Chapter.

Table 1: Renewable Generation Targets (in MWh)			
	2025	2035	2050
Total renewable generation in MWh	6,004	12,008	24,015

B.2 Thermal (Heating Buildings)

The first step to reduce energy demand for space heating is to weatherize homes and businesses (e.g. air sealing, insulation). Table 2 shows the targets for weatherizing existing structures in Chester. Note that the LEAP model-based targets for weatherization in Chester did not appear to be reasonable, so these targets are modified to be more consistent with statutory goals. Based upon our experience over the past few years, it will be difficult to reach these weatherization targets for existing structures. We assume that all new applicable structures will comply with the State energy building codes (i.e. [Residential Building Energy Standards](#), [Commercial Building Energy Standards](#)).

Table 2: Thermal Efficiency Targets			
	2025	2035	2050
Weatherize Homes	25%	50%	90%
Weatherize Businesses	25%	50%	90%

The next step is to then move toward the widespread utilization of renewable energy to heat homes and businesses. The LEAP model established the following targets for doing so in Chester. Table 3 shows the scale to which buildings should switch over to renewable heating systems in order to meet the state energy goals.

Table 3: Use of Renewables for Heating			
Thermal renewable energy use	2025	2035	2050
	49%	64%	92%

In order to achieve the overall renewable target for heating, the LEAP model is calling for investing in new efficient wood heating systems, cold-climate heat pumps or ground-source heat pumps. (See Table 4.)

Table 4: Thermal Fuel Switching Targets (by Number of Heating Units)			
	2025	2035	2050
New efficient wood heating systems	6	14	89
New heat pumps	173	468	901

Cold-climate heat pumps are also referred to as air-source heat pumps, mini-splits or ductless heat pumps. These systems are a good option to retrofit existing houses, and can be used to supplement an existing heating system. As explained on the [Efficiency Vermont website](#), “heat is collected from the exterior air, concentrated via an outdoor compressor, and distributed inside through an indoor room unit. Heat pumps require electricity to run, but can deliver more energy than they use.” They also provide air conditioning during the warmer months.

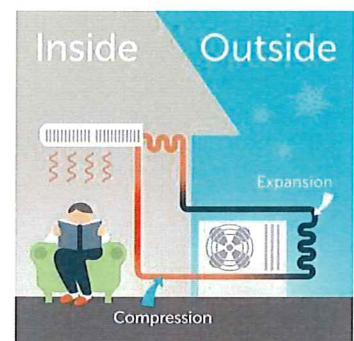


Figure 4: Illustration of how cold-climate heat pumps work. Source: Efficiency Vermont.

Ground-source heat pumps provide heating and cooling for buildings. They work similarly to air-source heat pumps, but instead they pump

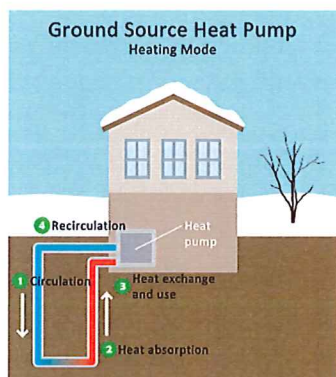


Figure 5: Illustration of how ground-source heat pumps work. Source: US EPA.

water or other fluid through pipes buried in the ground to collect energy. A more detailed description for how these systems work can be found on the [US EPA website](#). These are generally a better option for new construction installations.

Heating with wood is generally encouraged as it uses a locally-available fuel. However, sustainable wood harvesting is important in order to protect the environment and provide a viable, long-term local energy source. New efficient wood stoves that are EPA-certified are encouraged. Wood-chip heating systems are considered a good option to heat larger commercial, industrial or institutional buildings. See the [Efficiency Vermont website](#) for more information. A number of schools in the region use such heating systems.

B.3 Transportation

Transportation is probably the most difficult area to “bend the curve” to meet the energy goals, considering the rural nature of this area and how challenging it is to change human behavior. However, it must be done if we are to achieve the 90% by 2050 goal. The LEAP model used a number of assumptions in addressing this issue. The following targets are based on that LEAP model.

Table 5: Renewable Energy Use for Transportation			
Use of renewables for transportation	2025	2035	2050
	10%	31%	90%

Overall, transportation needs to shift to renewable fuel sources as shown in Table 5. The LEAP model is largely expecting this to happen through using electric vehicles, and the use of biodiesel by the trucking industry. Table 6 below shows the fuel switching targets for Chester.

Also required to meet the goals will be additional efforts to lessen the use of energy for transportation, including land use patterns that encourage walking and bicycling, public transportation, driving less, and ride sharing. Efficiency Vermont has information on its [website](#) about ways to achieve transportation efficiencies.

Table 6: Transportation Fuel Switching Targets			
	2025	2035	2050
Passenger cars switch to electric vehicles	478	765	1,722
Trucks switch to biodiesel	195	312	703

Chester Energy Survey
January, 2018

Five years ago, the State of Vermont embarked on a new energy plan. The goal is to meet 90% of Vermont's total energy needs from renewable sources by 2050. The state has asked towns to create their own energy plans to help reach this goal. State legislators believe Vermont can be a leader in global climate change efforts, while increasing our energy security, improving our economy, protecting ratepayers and reducing our total energy costs. The Town of Chester may choose to participate in this goal by adding an energy plan chapter to its Town Plan, thus gaining some say in the placement of renewable energy installations such as solar and wind. If this chapter is not added, the town will have no voice in the placement of renewable energy projects. The Planning Commission would like to get a sense of how Chester residents feel on this issue. Your input is vital to this process. We included a self-addressed envelope for your reply. You may also find a copy of the survey online by going to the Planning Commission page on the town website: <http://www.chestervt.gov/planning-commission.html>. You may also scan your filled-out form and e-mail it to Cathy Hasbrouck, the Planning Commission recording secretary at cathy.hasbrouck@chestervt.gov.

Thank you from the Chester Planning Commission:

Naomi Johnson, Claudio Veliz, Barre Pinske, Tim Roper and Cheryl Joy Lipton

1. On a scale of 1 – 5, how important are energy issues to you?

<u>207</u>	<u>105</u>	<u>36</u>	<u>8</u>	<u>6</u>	<u>3</u>
1 – Very important	2	3 - Neutral	4	5 - Not important at all	Blank

2. On a scale of 1 – 5, rate your view of non-residential wind power:

<u>113</u>	<u>86</u>	<u>78</u>	<u>34</u>	<u>49</u>	<u>5</u>
1 – I favor it	2	3 - Neutral	4	5 – I oppose it	Blank
enthusiastically				completely	

3. On a scale of 1 – 5, rate your view of non-residential solar power:

<u>166</u>	<u>89</u>	<u>53</u>	<u>24</u>	<u>29</u>	<u>4</u>
1 – I favor it	2	3 - Neutral	4	5 – I oppose it	Blank
enthusiastically				completely	

4. Do you currently have solar energy generating facilities at your home or business?

45 Yes 319 No 1 Blank

5. Do you have a wind generator at your home or business?

1 Yes 363 No 1 Blank

6. Do you burn wood or wood pellets for heat at your home or business?

190_Yes 166_No 9 Blank

7. Would you be in favor of allocating town resources to develop an energy plan chapter for the Town Plan if it gave the town a voice in the placement of renewable energy projects?

291 Yes 46_No 5 Pending or unknown 23 Blank

8. How do you feel about large solar arrays?

106	1	91	76	36	41	14
1 – I favor them enthusiastically	1.5	2	3 - Neutral	4	5 – I oppose them completely	Blank

9. How do you feel about solar arrays on buildings, public or private?

184	89	63	12	8	9
1 – I favor them enthusiastically	2	3 - Neutral	4	5 – I oppose them completely	Blank

10. Do you support the state goal of 90% of energy coming from renewable sources by 2050?

201	73	46	15	18	12
1 – I favor it enthusiastically	2	3 - Neutral	4	5 – I oppose it completely	Blank

11. Do you currently benefit from solar credits which are generated from a location other than your Chester home or business?

13_ Yes 336 No 4 Unknown 9 Blank

12. Do you currently live in the village or outside the village center?

90 in the village center 262_ outside the village center 13 blank

13. On a scale of 1 – 5 how informed do you feel about energy issues?

88	1	114	117	27	8	10
1 – Well informed	1.5	2	3	4	5 – Not informed at all	Blank