



VERMONT COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY

# APPENDIX E

DOCUMENTS REVIEW

# Summary of Documents Review

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Appendix A: Focus Areas and Actions/Strategies

## Introduction

The Consultant Team reviewed 34 documents and reports written between 2002 and 2013 by a variety of Vermont councils, RDCs, departments, commissions, committees, UVM and other entities. These reports were identified by the Agency of Commerce and Community Development, supplemented by a few additional documents selected by the Consultant Team. The reviewed reports are listed in Table 1.

The primary purpose of this review was to assure the Consultant Team was cognizant of the many planning efforts that preceded and provided a foundation for the preparation of a Comprehensive Economic Development Strategy (CEDS). These reports and documents were reviewed for the issues on which they focused and the recommended actions and strategies addressing those issues. The reports also were reviewed for their coverage on 13 cross-issue topics that are listed later in this report.

This review is not intended to be a free-standing document. Rather, the results of this review will be combined with the substantial input from the regional meetings, the findings of the Economic Base Analysis, input from the Vermont Cabinet, and other research. These combined findings and other input received will serve as a key contributory foundation for the competitive assessment, target sector identification, and action plan elements that are all part of the of the CEDS.

**Table 1**  
**Reports Reviewed by the Consultant Team**

1. 10 Reasons Why Vermont's Homegrown Economy Matters
2. CEDS for:
  - Chittenden County
  - Southern Windsor County
  - Southeastern VT
  - Northern VT 2011-2012
  - East Central VT March 2011
3. Vermont Economic Progress Council: A Plan for a Decade of Progress, 2002
4. Vermont Telecommunications Plan 2011: Broadband
5. Northern Vermont CEDS 2011-2012
6. Chittenden County ECOS Plan
7. East Central Vermont CEDS Plan 2011
8. Commission on the Future of Economic Development Report, 2009
9. Comprehensive Energy Plan and 2011 Electric Plan
10. Enhancing VT's Software and Information Economy
11. Farm to Plate Report - 4 Chapters and Appendices
12. The Green Economy and Environmental Enterprises in VT: Opportunities for the 21<sup>st</sup> Century 2008
13. Imagining Vermont
14. Legislative Wrap-up May 2013
15. Michael Porter 2011 VT Study
16. State of Vermont IT Strategic Plan 2013-2018
17. Tapping Tech 2.0
18. VT Advanced Manufacturing Partnership 2013 Final Report
19. VT Genuine Progress Indicator 1960-2011

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20. VT Science and Technology Plan brochure
21. VT Strategic Plan 2012-2015
22. VT Long Range Transportation Business Plan
23. VTrans Strategic Plan 2015
24. VTrans Factbook 2012
25. Economic Importance of Wood Products
26. VT Wood Products Strategic Plan Update
27. DOL Reports
  - 2010 Workforce Development Council Annual Report
  - Work. Play. Live A report on the Workforce in the Vermont Travel and Recreation Sector
  - Workforce Leadership Report pt 1: Next Generation Workforce Leadership Report Performance Goals and Measurements, 2010 Annual Report
  - Workforce Leadership pt 2: Report Agency/Institution Annual Report 2010
  - Growing the Vermont Green Building Industry-Preliminary Findings for the Green Building Industry and Education Centers of Excellence (IECE) 2010
28. VT Forestry Sector Data 2013
29. Vermont's Non-Profit Sector
30. The Council on the Future of Vermont, A project of the Vermont Council on Rural Development

### **Focus Areas and Actions/Strategies**

The reviewed reports and documents addressed 22 different topics

- |  |                               |
|--|-------------------------------|
| 1. Infrastructure                      | 12. Industry clusters         |
| 2. Telecommunications and broadband    | 13. Advanced manufacturing    |
| 3. Transportation services and systems | 14. Science and technology    |
| 4. Knowledge-based investments         | 15. Wood products             |
| 5. Creating an innovation climate      | 16. Regional CEDS             |
| 6. Economic vision                     | 17. Rural development         |
| 7. Developing a home grown economy     | 18. Strategic planning        |
| 8. Energy                              | 19. Workforce                 |
| 9. Green economy                       | 20. Non-profits               |
| 10. Information technology             | 21. Farm to plate/agriculture |
| 11. Imaging Vermont                    | 22. Future development        |

There was some duplication of coverage of these topics in the reports, but with frequent differences of perspective, based on the nature of the agency producing the report. In addition to the coverage provided on these topics, most of the reports recommended actions or strategies to address situations needing attention within the focus areas. Over 350 strategies and actions were provided in the reports. Accomplishments were also provided on occasion.

Appendix A contains a summary of the reviews for each of the reports. Each report or document summary identifies the name of the report, its date and author, and areas of focus and the recommended actions or strategies to be taken.

## Primary Reports

Four documents were identified by ACCD as particularly important. These were:

- The Commission on the Future of Economic Development Final Report – 2009
- The Vermont Advanced Manufacturing Partnership Final Report – 2013
- The Vermont Comprehensive Energy Report – 2011
- The Farm to Plate Strategic Plan – 2013 version

Each of these documents presents many goals and recommended action items that can support or be included in the CEDS; these are summarized as follows.

### Commission on the Future of Economic Development Final Report

In April 2009, the Commission on the Future of Economic Development issued *The Report of the Commission on Economic Development* with the subtitle “Economic vitality, security, and opportunity for all Vermonters.” This subtitle is essentially the same as the Vision Statement adopted for the Vermont CEDS now being prepared.

The report articulates four primary goals and 29 related work elements considered to be most critical to the state’s future prosperity and the welfare of Vermont’s citizens. The Report also suggests 38 benchmarks as a means for monitoring progress, and recommended the formation of a Vermont Economic Development Board as the primary implementation agency.

These goals and related work elements are:

- **Vermont’s businesses, educators, non-governmental organizations and government form a collaborative partnership that results in a highly skilled multi-generational workforce to support and enhance business vitality and individual prosperity.**
  1. Include in a Comprehensive Economic Development Plan an education component that builds on Vermont’s lifelong educational system as a significant contributor to the creation and support of economic opportunity.
  2. Create a unified education budget to allocate resources for all educational and workforce training programs from pre-k through 16 and adult learning.
  3. Sponsor, lead and support a collaborative partnership among governmental agencies, educators, businesses and Vermont citizens to create the curricula and resources necessary to prepare Vermonters for new career opportunities. This collaborative effort will occur in all aspects of Vermont education: traditional schooling from K through 16 as well as technical training, apprenticeships, internships, school-to-work and non-traditional programs such as The Vermont Training Program, HiTech Vermont, and Vermont Works for Women.
  4. Create a robust statewide school-to-work, internship and apprenticeship program, to provide workplace and life skills (including financial literacy) training starting at the middle school level

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so that students are exposed to and participate in work experience and career opportunities; supply technical, legal and financial support and incentives for these efforts.

- **Vermont invests in its digital, physical, and human infrastructure as the foundation for all economic development.**

### Digital/Communication Infrastructure

1. Hold Vermont to its commitment to provide broadband and cellular access to 100% of Vermonters by the end of 2010.
2. Incorporate the statewide digital technology/telecommunications plan into the Comprehensive Economic Development Plan.
3. Include in the statewide Technology/Telecommunications Plan statewide mapping of locations on which the construction and operation of technology and communication infrastructure is a “permitted use”; include in the state regulatory and permitting processes for digital technology infrastructure the power to preempt local plans and ordinances where there is an overriding statewide or regional public interest in developing the infrastructure.
4. Leverage Vermont’s digital infrastructure and develop innovative policies to give Vermont an advantage that attracts and retains e-businesses, and supports the growth and success of existing Vermont businesses.
5. Ensure that all Vermonters have access to and share the benefits of Vermont’s communication and technology infrastructure.

### Physical Infrastructure

1. Make the development, on-going maintenance, improvement and, where appropriate, expansion of public infrastructure a key component of the Comprehensive Economic Development Plan.
2. Include in the Comprehensive Economic Development Plan a long term plan and a dedicated, restricted fund enables the necessary investments to maintain, repair, and replace Vermont’s public infrastructure including, but not limited to, digital, energy, water/sewer, and transportation, including bridges, roads, railways, and airports.
3. Create a statewide public transportation authority to fund and maintain a statewide multimodal system for transporting people and products.
4. Provide support to ensure the availability and health of essential physical infrastructure for designated downtowns, village centers, new town centers and growth centers, including industrial sites.
5. Make the development, maintenance, improvement and, where appropriate, expansion of energy infrastructure a key component of the Comprehensive Economic Development Plan with

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the goal of secure, reliable, and cost-competitive energy through energy conservation, renewable energy, efficiency, and small scale power generation.

### Human Infrastructure

1. Recognize Vermont's investments in education, community programs, and human services as economic development investments, and make the availability, creation and funding of human infrastructure a key component of the Comprehensive Economic Development Plan.
  2. Invest in higher and post-secondary education, health care, childcare, and job readiness to provide Vermonters the ability to participate in the workforce.
  3. Create regulatory changes and make investments needed to increase the supply of workforce housing.
  4. Establish an equitable and economically sustainable system that provides basic health care to all Vermonters and rewards healthy behavior and wellness.
- **Vermont state government takes advantage of its small scale to create nimble, efficient and effective policies and regulations that support business growth and the economic prosperity of all Vermonters.**

### Integrated Statewide Planning and Policies

1. Establish an inter-agency Economic Development Planning Team at the Secretary level that participates in developing and implementing a statewide economic development plan with broad public input that integrates regional land use and economic development plans, state agency plans, and the goals and recommendations of this Report into a single statewide Comprehensive Economic Development Plan. The team should include representatives of all relevant state agencies that are directly or indirectly involved in or whose policies affect economic development, including Commerce and Community Development, Natural Resources, Agriculture, Transportation and Human Services. This statewide Comprehensive Economic Development Plan will be submitted to the state legislature for full endorsement.
2. Recognize in the Comprehensive Economic Development Plan the importance of indigenous, small-scale, value added and land-based entrepreneurs and businesses in our economy and to our economic future; specifically target economic development policies and support to sustain and grow our existing businesses and create opportunities for emerging businesses and entrepreneurs.
3. Create and maintain a single portal, through the Economic Development Planning Team and its regional economic development and planning partners, for entrepreneurs and existing businesses to access coordinated technical and financial assistance for growing and expanding businesses in Vermont.
4. Expand the capacity and ability of Vermont colleges and universities to provide targeted assistance to entrepreneurs, including but not limited to business management and financial

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training, research and development, technology transfer, patent processing, internships and mentoring.

5. Provide a process, sufficient funding and technical support for Regional Economic Development Corporations and Regional Planning Commissions to work collaboratively to develop comprehensive regional plans that serve as the foundation of and are integrated into the statewide Comprehensive Economic Development Plan.
6. Broaden and revise growth center laws and regulations to create greater flexibility, greater efficiency, and stronger incentives for development of and within growth centers. Provide planning grants and technical assistance for the establishment of growth centers. Empower conclusive determinations of state and municipal regulatory criteria at the time of growth center designation. Create enhanced financial incentives (including tax incremental financing, tax incentives and targeted VEGI programs) for businesses and for investment in human infrastructure (including child care, health care, work force training, and affordable housing) that support growth centers.

### Efficient Regulation and Permitting

1. Empower the Economic Development Planning Team to be the state's representative in all permitting and regulatory processes to consolidate and streamline the State's participation in the permitting process; the Team should provide a single, timely, statement that represents a consensus of all relevant agencies and is consistent with the Comprehensive Economic Development Plan.
2. Identify and eliminate both substantive and procedural redundancies among local, regional and state regulations.
3. Establish mandatory performance criteria and time limits for regulatory and permitting decisions, measured from the date of application for the date of issuance or denial of all state or local permit or approval, that recognize the adverse effect that undue permitting delays have on economic development.
4. Include in all regulatory and permit programs a requirement, for all those applying for land use development permits or regulatory approvals and those seeking party status (including statutory parties), to participate in mediation for all disputes. This mediation process will be available at the request of any applicant or party at any time following the filing of an application — including after an issuance of preliminary findings by the permitting or regulatory authority prior to a final ruling.
5. Require all land use, development and permitting statutes, regulations and rules to provide for comprehensive permitting and pre-approval of specific growth centers, "master planned" areas and "shovel-ready" sites for commercial and industrial development, housing development and physical infrastructure.

- **Vermont leverages its brand and scale to encourage a diverse economy that reflects and capitalizes on our rural character, entrepreneurial people and reputation for environmental quality.**
  1. Ensure that Vermont policies and programs support and retain Vermont’s existing businesses while offering additional financial and regulatory incentives that encourage investment in the “green economic sector” – energy efficiency, renewable energy, sustainable and value-added agriculture, forestry and other land-based sectors, knowledge-based industry—and in “sustainable and green” practices.
  2. Promote entrepreneurial efforts by creating more effective incentives for investors to invest in Vermont’s small businesses. Evaluate and, where appropriate, reduce or remove regulatory barriers to aggregating and accessing private capital by modifying “capital formation”, “Blue Sky” and “licensed lender” restrictions.
  3. Adopt and evaluate taxation policies that are competitive with other states, provide value to Vermonters, assist in new business formation, and are progressive without being punitive or unpredictable.
  4. Stabilize and, where possible, reduce major business costs that are affected by public policy including, but not limited to, the following: energy, health care, taxes and workers compensation.

## **Vermont Advanced Manufacturing Partnership Final Report**

The stated objective of this report is to “...support *Next Generation Manufacturers*— manufacturers who are planning for the growth of their businesses, investing in their employees by providing the necessary skills training for them to do their jobs, and seeking innovative new products and services, customers and markets, processes and business models.”

Vermont manufacturing includes more than 1,000 firms employing about 31,300 workers at wages substantially above the state average, and contributing 11.1% (\$2.9 billion in 2009) of the state GDP.

There are eight major critical recommendations that have been identified of having greater urgency to begin the process of helping Vermont’s manufacturing sector to compete in the global marketplace and, to create quality jobs for Vermonters. They are grouped in four categories not ranked in importance. They were developed from 19 specific recommendations that emerged from the four working groups at an Advanced Manufacturing Partnership Conference held July 12, 2012. The four working groups were; Customer-Focused Innovation; Advanced Talent Management; Systemic Continuous Improvement; and Extended Enterprise Management.

### **Workforce**

#### Recommendation #1:

Develop and implement an education model (K-16) to adopt competency-based math standards for students and teachers that can support advanced manufacturing skills development based on models developed by Boston University and the University of Michigan no later than 2014.

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### Recommendation #2:

Develop and implement entrepreneurship curricula in Vermont schools and state colleges such as Champlain College's "BYOBiz" program. Support and build on the successes and investments of the Vermont Manufacturing Extension Center (VMEC) and its federal partner NIST MEP, to teach and encourage the use of "Innovation Engineering" as a proven system to accelerate the creation and commercialization of meaningfully unique ideas while working with higher education in Vermont to develop a post-secondary curriculum modeled after the Innovation Engineering degree program at the University of Maine.

### Recommendation #3:

Restore full funding to the Vermont Training Program in the Agency of Commerce and Community Development and create a special fund targeted to upgrading the math skills of Vermont workers.

### Recommendation #4:

Help create an "Innovation Ecosystem" to sustain a culture of ongoing practical research and development by developing a non-profit Vermont Advanced Manufacturing Innovation Center modeled after the Nanotech Center in New York and the Dartmouth Regional Technical Center (DRTC) leveraging the resources of the University of Vermont, Vermont Technical College and the other Vermont state colleges, Norwich University and others as appropriate.

### Recommendation #5:

Develop a "Vermont Innovation Index" with dashboards to monitor trends and compare Vermont to national metrics to measure performance and guide policy and financial investments.

## **Advocacy**

### Recommendation #1:

Study the possibility of creating a Manufacturing Division within the Department of Economic, Housing and Community Development and report back to the Governor and legislature no later than June, 2013.

## **Networking**

### Recommendation #1:

Direct ACCD, working with VMEC, to create a low-cost virtual tool for manufacturers to exchange information on supply chain issues, excess capacity availability, equipment and space sharing, and other general information to connect Vermont's manufacturers.

### Recommendation #2:

Facilitate and accelerate expanded access by Vermont manufacturers to global markets using primarily existing technical assistance resources to help them reach the 95% of consumers who live outside our nation's borders.

1. The goal is to help Vermont manufacturers develop and execute customized plans to begin or expand exporting into global markets in ways that stimulate the growth of profitable new customers, markets, partnerships and local investments. Reduced risk, increased success, and sustainable sales growth are desired outcomes.
2. Examine company needs and the current focus, offerings, and staffing of existing Vermont export assistance providers / resources, including: the VT Global Trade Partnership (VGTP)

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within ACCD, the local U.S. Dept of Commerce Export Assistance Center (USEAC), the Vermont International Trade Alliance (VITA), VtSBDC and VMEC.

3. Move to rapidly deploy and pilot the local use of ExporTech, a proven "Export Acceleration System." In development and use since 2006, ExporTech is a system / process (versus just training) to help companies enter or expand into international markets. The results for each participating company include a customized, actionable "Strategic Export Growth Plan" vetted by a panel of international growth experts, plus coaching support. Recently reinvigorated and promoted by the nationwide NIST MEP program (with whom VMEC is affiliated) in close partnership with the U.S. Commercial Service, ExporTech has effectively been used in 25 states and by more than 415 companies. On average, it has reduced entry time into international markets from about 18 months to less than 6 months. Support is immediately available through NIST MEP using experienced third-party contracted resources who can help organize Vermont's resources and help jump start this program in Vermont.

### **Public Outreach**

#### Recommendation #1:

Develop an ongoing public relations campaign to tell the manufacturing story. Strategies could include, but are not limited to:

1. Promote an annual Manufacturers Open House and/or Manufacturers' Summit.
2. Create a website and other possible ways to showcase Vermont manufacturers.
3. Encourage local manufacturers in reaching out to local educators and guidance counselors to conduct tours and hold speaking engagements in the classroom.
4. Create annual Innovation Awards for the most exciting research and best practices by Vermont manufacturers.
5. Promote manufacturing speakers for VT National Education Association conventions and local civic organizations such as Rotary International, Lions Clubs, etc. to tell exciting success stories.

### **The Vermont Comprehensive Energy Report**

In 2011, the Vermont Department of Public Service issued a Comprehensive Energy Plan (more than 500 pages) covering electricity, heating and process fuels, and energy in transportation and land use decisions. The report found that while robust electric efficiency efforts in the past decade had resulted in keeping electric demand down and many renewable sources were being used to meet energy needs, comparatively little progress had been made on improving energy usage in transportation and heating.

The Plan established a goal of having 90% of VT's energy come from renewable sources by 2050. To meet this goal, the plan emphasizes continued focus on energy efficiency and conservation. With this as a foundation, the plan identifies four "drivers of progress":

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- Finance and funding
  - Dedicate a portion of VT's \$6.4 million Qualified Energy Conservation Bond allocation for domestic and business energy efficiency programs
  - Deploy a Clean Energy Development Fund to finance energy efficiency improvements
- Innovation and expertise
  - Expand on UVM, VTC and other higher education Institutions' initiatives and partnerships in 'smart grid' technology and transportation research
- Outreach and education
  - Build on VT Energy Education Program to include adults in households and strengthen Town Energy Committees
- Regulatory policies and structures
  - Legislature should adopt mandatory Renewable Portfolio Standard (RPS) for utilities to increase rate of adoption of renewable technologies

More specifically, the Plan identifies the following priorities:

### Electricity

- Achieve an affordable and achievable renewable energy portfolio standard of 75% by 2031
- Refine the state's feed-in tariff to privilege distributed renewable generation

### Heating

- Create a "whole-buildings efficiency roadmap"
- Aggressive new-construction efficiency/renewable tech standards
- Greater use of bio-blended fuels and renewable energy

### Transportation

- Establish an Interagency task force to plan for electric and alternative-fuel vehicles (e.g. plug-in electric vehicles - PEVs,) in VT and the region

### Communities and Land Use

- Align local, regional, and state policies across agencies and departments to support thoughtful and resilient growth in downtowns and villages
- Climate Cabinet review of downtown designation criteria

### State Leadership

- State government must sharpen its focus on assuring its buildings are energy efficient and strategically deploying renewable energy systems

## **The Farm to Plate Strategic Plan**

During the 2009 legislative session, two member-based public policy organizations, Vermont Businesses for Social Responsibility and Rural Vermont, crafted and helped win legislative approval for the creation of a Farm to Plate Investment Program (F2P). It was approved by the Senate and House in May 2009 and signed by Governor Douglas, as Sec. 35. 10 V.S.A. chapter 15A § 330. The legislation tasked the Vermont Sustainable Jobs Fund, in consultation with the Vermont Sustainable Agriculture Council, with crafting a strategic plan based on a broad scope of work.

The primary goals of the legislation are to:

1. Increase economic development in Vermont's food and farm sector
2. Create jobs in the food and farm economy
3. Improve access to healthy local foods

The full plan is an extensive document that contains numerous goals and high priority strategies aimed at accomplishing the legislative goals by 2020.

The recommended Goals, broken down by focus area ,include:

### Understanding Consumer Demand

**Goal 1:** Consumption of Vermont-produced food by Vermonters and regional consumers will measurably increase.

**Goal 2:** Consumers in institutional settings (e.g., K-12 schools, colleges, state agency cafeterias, hospitals, prisons) will consume more locally produced food.

**Goal 3:** Vermonters will exhibit fewer food-related health problems (e.g., obesity and diabetes)

### Farm Inputs

**Goal 4:** Options for farmers to reduce their production expenses will be widely disseminated and utilized.

**Goal 5:** Agricultural lands and soils will be available, affordable, and conserved for future generations of farmers and to meet the needs of Vermont's food system.

**Goal 6:** Farms and other food system operations will improve their overall environmental stewardship to deliver a net environmental benefit to the state.

### Food Production

**Goal 7:** Local food production—and sales of local food—for all types of markets will increase.

**Goal 8:** Vermont's dairy industry is viable and diversified.

**Goal 9:** The majority of farms will be profitable.

**Goal 10:** All Vermonters will have a greater understanding of how to obtain, grow, store, and prepare nutritional food.

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### Food Processing and Manufacturing

**Goal 11:** Vermont's food processing and manufacturing capacity will expand to meet the needs of a growing food system.

### Wholesale Distribution and Storage

**Goal 12:** A sufficient supply of all scales and types of on-farm and commercial storage, aggregation, telecommunications, and distribution services will be available to meet the needs of increasing year-round food production and consumer demand.

### Retail Distribution and Market Outlets

**Goal 13:** Local food will be available at all Vermont market outlets and increasingly available at regional, national, and international market outlets.

### Nutrient Management

**Goal 14:** Organic materials from farms (e.g., livestock manure) and food scraps will be diverted from landfills and waterways and used to produce compost, fertilizer, animal feed, feedstock for anaerobic digesters, and other agricultural products.

### Food Security

**Goal 15:** All Vermonters will have access to fresh, nutritionally balanced food that they can afford.

### Food System Education

**Goal 16:** Vermont K-12 schools, Career and Technical Education Centers, and institutions of higher education will offer a wide range of curricula, certificate and degree programs, and conduct research aimed at meeting the needs of Vermont's food system.

### Food System Labor and Workforce Development

**Goal 17:** The number of locally owned and operated food system businesses in Vermont is expanding.

**Goal 18:** Vermont's food system establishments will provide safe and welcoming working conditions, livable wages, and have access to a skilled, reliable workforce.

### Food System Business Planning and Technical Assistance

**Goal 19:** Business planning and technical assistance services will be highly coordinated, strategic, and accessible to Vermont's food system businesses.

### Financing the Food System

**Goal 20:** Food system entrepreneurs and farmers will have greater access to the right match of capital (grants, loans, mezzanine debt, equity, loan guarantees, leases, and incentives) to meet their financing needs at their stage of growth and for their scale of business.

**Goal 21:** Private foundations, state and federal funding sources, the Vermont Legislature, the governor's administration, and food system investors will coordinate and leverage available resources to maximize the implementation of this Plan.

### Food System Energy Issues

**Goal 22:** Food system enterprises will minimize their use of fossil fuels and maximize their renewable energy, energy efficiency, and conservation opportunities.

### Food System Regulation

**Goal 23:** Regulations and enforcement capacity will ensure food safety, be scale appropriate, and enable Vermont food system enterprises to succeed in local, regional, national and international markets.

### Food System Leadership, Communication, and Coordination

**Goal 24:** Vermont’s governor, legislature, and state, regional, and local agencies will continue to celebrate Vermont’s food system and will champion it as an economic development driver for the state.

**Goal 25:** Food system market development needs will be strategically coordinated. **Food System**

## **Topic Areas Considered for all Documents**

In order to provide a standardized document review process, 13 topic areas were identified and a spreadsheet format used to accumulate information from the various reports about those topics. The 13 topic areas reviewed in the reports and documents were:

1. Business closures
2. Telecommunications and broadband
3. Business real estate
4. Clusters
5. Competitiveness
6. Demographics
7. Energy (electric and gas)
8. Major employers
9. Natural resources
10. Service providers
11. Transportation
12. Water and sewer
13. Workforce and training

A synopsis of the key findings is presented below.

### **Business Closures**

- Contain expenditures in the state through a state vendor sourcing and “buy local” program
- Retailers need assistance in developing effective websites for e-tailing
- Assistance is needed in developing marketing strategies and tactics
- The lessons learned in other states should be investigated
- There has been a decline in business establishments in the state since 2001
- The state’s dairy industry is adversely affected by
  - volatile pricing
  - scale of production, distribution and marketing outlets
- The state’s agriculture industry is adversely affected by
  - Difficult access to farm land by new and expanding farmers
  - Raising operating costs
  - Food safety regulations and concerns
  - The state’s leadership and investment in Vermont’s agriculture industry
  - There are pressures in Vermont for non-profits to merge due to rising costs, declining revenues, and increased service needs, but mergers are not occurring

## Telecommunications & Broadband

- Overarching economic challenges to the business case for sustainable broadband infrastructure in Vermont
  - Sparse population
  - Slow adaptation in newly served areas
  - Topography and the high costs of backhaul and tower construction
  - 18% of Vermont businesses report that they do not have broadband and half of those businesses report that they don't have it because it is not available at their location.
  - 53 percent of residential internet users don't have broadband because it isn't available to them where they live
  - The demand for uploading speeds will increase
  - VT has fiber optic cable servicing the outer perimeters of the State but high-speed telecommunications is not highly developed in the small towns
  - The available broadband service is slow
  - Inadequate broadband and cell service impedes business development, may encourage business relocation out of state
- Strategies are necessary to overcome the state's telecommunications challenges for economic vibrancy.
  - Universal high speed broadband with fixed or mobile connectivity
- Smart grid is where electricity meets telecommunications and has enormous potential benefits for Vermont workers and residents
  - Vermont electric utilities will make substantial capital investments in smart grid infrastructure that leverage and are leveraged by investments in broadband infrastructure

## Business Real Estate

- Modest supply in the state
- RDCs should revitalize properties, including brownfields as “green enterprise zones”
- Industrial buildings being retrofitted as multi-tenant buildings

## Clusters

- Current
  - Healthcare & social assistance
  - Retail
  - Manufacturing
  - Accommodation & food service including tourism
  - Professional scientific & technical services
  - Agriculture (including food processing) and natural resource-based production, i.e. forest products
  - Education

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- Targets:
  - Information technology
  - Communications and media (including IT, E-commerce, digital media)
  - High value-added manufacturing
  - Higher education
  - Clean tech/green tech
  - Healthcare & wellness, including Electronic Health Records
  - Homeland security (border security and emergency services)
  - Green Technologies such as energy efficiency companies, and technology development to support energy efficiency and renewables; companies creating value added products and services and companies operating to sustain and enhance the natural environment
- Agriculture
  - State has underdeveloped, fragmented processing, distribution and storage dairy infrastructure
  - Access to affordable land for new and expanding farmers is a problem
  - Limited access to flexible capital in the food system is a problem
  - Increase state support is needed
  - Agriculture technology applications being developed by UVM
- Forest and Wood Products
  - The annual contribution of forest-based manufacturing and forest-related recreation and tourism to the Vermont economy is over \$1.5 billion.
  - Forest-based manufacturing contributes \$1.0 billion in value of shipments to the economy in 2005 or 9.3% of Vermont's total manufacturing sales.
  - The forest-based manufacturing industry provides employment for 6,379 people and generates a payroll of over \$207.4 million.
  - Forest-based recreation and tourism provides employment for over 6,300 people and generates payrolls of \$93.0 million.
  - Wood provides the energy for approximately 6% of electrical and heating use in Vermont.
  - Challenges are global competition, high energy costs, high insurance costs, recruitment and retention of workers, among other factors.
  - Despite the challenges the forest products industry produces at high levels compared with historic production highs.
  - Investment in the latest technology in existing forest products manufacturing sectors as well as developing new markets, and exploring new products such as biofuels, are key avenues to a successful future for this industry.
  - Forest-based manufacturing provides 12% of the manufacturing payroll and employs 16% of manufacturing employees.
  - The sawmill and wood energy industries are the largest users of wood in the state.
  - The state's forest attracts millions of visitors to the state for recreation and tourism activities, contributing almost \$500 million. Altogether, the contribution of forest based manufacturing and forest-related recreation and tourism to Vermont's economy is over \$1.5 billion.

### **Competitiveness**

- NY has competitive tax incentives for business
- NH does not have sales tax or income tax and low workers comp rates

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- Minimum wage in VT is higher than national average, placing VT at a disadvantage
- Chittenden County is the center of VT's economy.
- Disparity between significant higher education programs present in the region and the low-skill/low-wage jobs available is likely to be driving younger workers out of the state.
- There is an existing State Opportunity Zone
- State plans to revamp Standard Offer program to provide advantageous long-term contracts for distributed renewable energy projects If implemented, Plan initiatives should stabilize long-term energy costs for VT companies
- Strong branding potential for Vermont building on current perceptions (Forbes and others rate VT as #1 green state)
- State government supports small and start up biz, but difficult to expand in VT, expanding biz move out of VT
- Implement the strategies identified and Vermont will be competitive.
- Develop a statewide economic development strategic plan.
- Promote programs, policies and legislation that support economic growth and competitive advantage for Vermont businesses and job creation in Vermont.
- Provide fair and consistent regulation of the marketplace.
- Road and rail infrastructure inadequate for expected development in integrated supply chains, e.g. longer trailers, higher, heavier rail cars

### **Demographics**

- Growing population overall in the state created in part by immigrants in some regions
- Declining population in some regions
- Aging population
- Need for affordable housing.
- Green entrepreneurs attracted by Vermont environment and lifestyle as much as business opportunity; potential to capture college grads interested in developing green businesses
- Very slow population growth statewide
- In 1960 75% of residents were born in VT but by 2005 that rate was 53%
- Number of older people in the state dependent on working age population will be disproportionate
- VT aging population will require growth of medical-service related jobs
- Aging population will require more public transit

### **Energy (Electric & Gas)**

- In 1990 VT ranked as one of the least competitive states with respect to energy costs
- VT Biz Roundtable is concerned VT is not keeping pace with utility companies in other states who have programs to assist with energy costs
- VT has long history of energy efficiency programs.
- There is a desire to develop efficient, reliable, cost-effective, environmentally sensitive infrastructure that reduces export of dollars to other areas.
- Concern over the cost and reliability of energy
- Numerous solar and wind developers as well as biomass fuels providers; energy service companies such as Vermont Energy Investment Corp. (VEIC), Biomass Energy Resource Center (BERC)
- Using VT's forest product industry such as combined heat and power projects

## Vermont Comprehensive Development Strategy

- Opportunity for state to do something innovative in clean energy generation because of size, scale, and natural resources of the State, e.g. efficiency and local and distributed energy systems
- Promote a renewable and low carbon energy footprint to implement climate change goals of the Comprehensive Energy Plan (CEP) while keeping energy costs competitive.
- Promote energy efficiency and conservation in all sectors to improve our environment and enhance our competitive position.
- Install and support Advanced Metering Infrastructure;
- Increase communication technology across sections of infrastructure to reduce outages and improve power quality;
- Deploy local, distributed generation in a manner that supports Vermont’s electric transmission system.
- State has a high dependency on fossil fuels; alternatives need development

### **Major Employers**

- Stowe Mountain Resort is largest employer (650) in Northern Vermont
- Hospitals/health care are major employers in Northern Vermont
- IBM, 7th Generation; NRG Systems; Ben & Jerry's; Green Mountain Coffee Roasters; Concept II; King Arthur Flour are included among the state’s major employers
- UVM, Fletcher Allen Health Center, other hospitals and colleges

### **Natural Resources**

- Reduce carbon emissions to help achieve state targets, reduce climate change impacts
- Vermont is a prime location for trade with Canada
- Lake Champlain attracts tourists
- Recreation in Northern Vermont: Long Trail, Catamount Trail, Snowmobiling, Derby/Newport trail connects to Canada, Missisquoi Recreation Trail, Lake Champlain Canoe Trail
- Strong emphasis on working lands. Increasing number of farms.
- Increasing number of farms in Chittenden County
- Companies focused on creative use of/treatment of waste materials and biomass should produce net gains for Vermont environment
- Increase public’s knowledge and use of Vermont’s parks, historic sites and resources to maintain a shared sense of the environment, history and community, including strengthened stewardship of public and private historic assets.
- Protect, sustain and enhance conservation of our natural resources for the benefit of this and future generations and to enhance our quality of life
- Ensure Vermont is more resilient to natural disasters, including flooding, and to the effects of climate change
- Maintain and enhance the health and productivity of farm and forest land, and wildlife habitats
- Promote outdoor and traditional recreation opportunities and access.
- Promote Vermonters’ awareness of and engagement with the working landscape to embrace its cultural, economic and environmental realities and benefits.

### **Service Providers**

- Most ED service providers in Chittenden County are co-located
- VT Environmental Consortium, numerous environmental consulting and engineering firms, VEIC, BEREC etc.
- UVM Transportation Research Center (<http://www.uvm.edu/~transctr/>) is potentially valuable asset for alternative fuels/transportation options development in VT
- EDCNV provides technical and financial assistance including micro-loan programs [We are aware this is no longer the case]

### **Transportation**

- VT transportation infrastructure is aging, substandard, and likely to outstrip State's financing capacity to repair
- Enhance highway safety through improvements in infrastructure and driver behaviors.
- Preserve, maintain and operate Vermont's transportation system in the most cost effective and efficient manner.
- State transportation strategy focuses on improvements to multimodal transportation network to address expected doubling of freight traffic by 2025 and accommodate rolling stock for global integrated supply chains
- Need for a regionally integrated multi-modal transportation system
- Northern VT County airports do not meet FAA standards for nighttime flying the ability to meet these standards is critical for just in time delivery
- Chittenden: Worsening road congestion. Areas with need for public transportation. International airport. Inadequate train service. Many improvement needs identified,
- Concern over deterioration of physical infrastructure state-wide
- Provide for and increase access to a statewide network of safe, secure, and resilient transportation systems.
- Vermont has an extensive multi-modal transportation system
- VTTrans owns rail lines throughout the state and 9 state airports

### **Water and Sewer**

- Chittenden: Generally good. Some limitations in smaller communities. Some storm water management issues and seasonal flooding.
- John Todd, UVM professor emeritus, developed his Buckminster award-winning "Eco Machines" waste treatment technology in Vermont; now housed in MA
- Concentrate residential and commercial development, and assure supporting infrastructure for that development in keeping with Vermont's existing compact settlement patterns and in a manner that supports productivity of the state's working landscape.
- Ensure Vermont's water, sewer and storm water infrastructure meets federal and state requirements and is located and constructed so as to minimize damage and failure in the event of flooding or other natural disasters.

### **Workforce and Training**

- Northern VT: Need for training with computers and information technology
- Northern VT: Shortage of employees with specific skills is one of the greatest barriers to attracting new businesses and expanding businesses
- Northern VT: Need for more vocational/technical education programs

## Vermont Comprehensive Development Strategy

- Chittenden: Private sector employment down between 2000 -2010. Low unemployment rate, high labor participation rate. Workers with technical skills hard to get.
- There is a lack of sufficient number of technically skilled workers
- Educational institutions in the state are reluctant to see themselves as engines of economic development
- Green Economy: Typical disconnect between skills of VT grads and needs of companies; some specialized training needed for key positions; need to retool HS curricula to address needs of green employers
- Vermont farmers have challenges with finding labor
- Tech internship program, created in 2010, helped place more than 60 college students with Vermont tech companies. Internships make students aware of the great employment opportunities in Vermont, and provide employers the chance to recruit their future workforce.
- The average wage at a software company in VT is \$65,000 annually, compared to \$51,841 for the median household income in VT in 2012
- For every one software developer hired, tech companies add an additional 6 nontechnical supporting positions in fields such as sales, marketing, support, administration and accounting.
- The Vermont Tech Jam, an annual job fair and tech expo created in 2008 gets bigger every year. 2100 job seekers, students and tech enthusiasts came to the 2011 tech Jam in Burlington.
- Help workers achieve permanent jobs with a livable wage and benefits, in a safe and healthy work environment
- Provide programmatic and economic support to Vermonters who are unemployed
- Focus education and economic programs and systems to ensure students at all levels are digitally literate and career ready
- Promote and facilitate digital literacy for Vermonters of all ages,
- Increase the number of students who are career and college-ready for Science Technology, Engineering and Mathematics (STEM) field opportunities.
- Challenges for 2011:
  - ✓ Little past growth in the available workforce, with declines anticipated in 2012 and beyond.
  - ✓ An older VT workforce than most states.
  - ✓ Retiring workers with institutional knowledge.
  - ✓ Much higher skills are required to get and keep a job
  - ✓ Employer report difficulty in finding skilled workers
  - ✓ More than 1,000 VT students leave HS each year before graduating
  - ✓ Employers invest more in skilled workers than unskilled workers