City of Auburn and Cayuga County

# COMPREHENSIVE SUSTAINABLE ENERGY AND DEVELOPMENT PLAN

Developing the Vision and Plan
For Sustainable Economic Development
With Energy Efficient and Quality of Life Improvements

March 2009

Prepared by the City of Auburn and Cayuga County
in Consultation with Larsen Engineers

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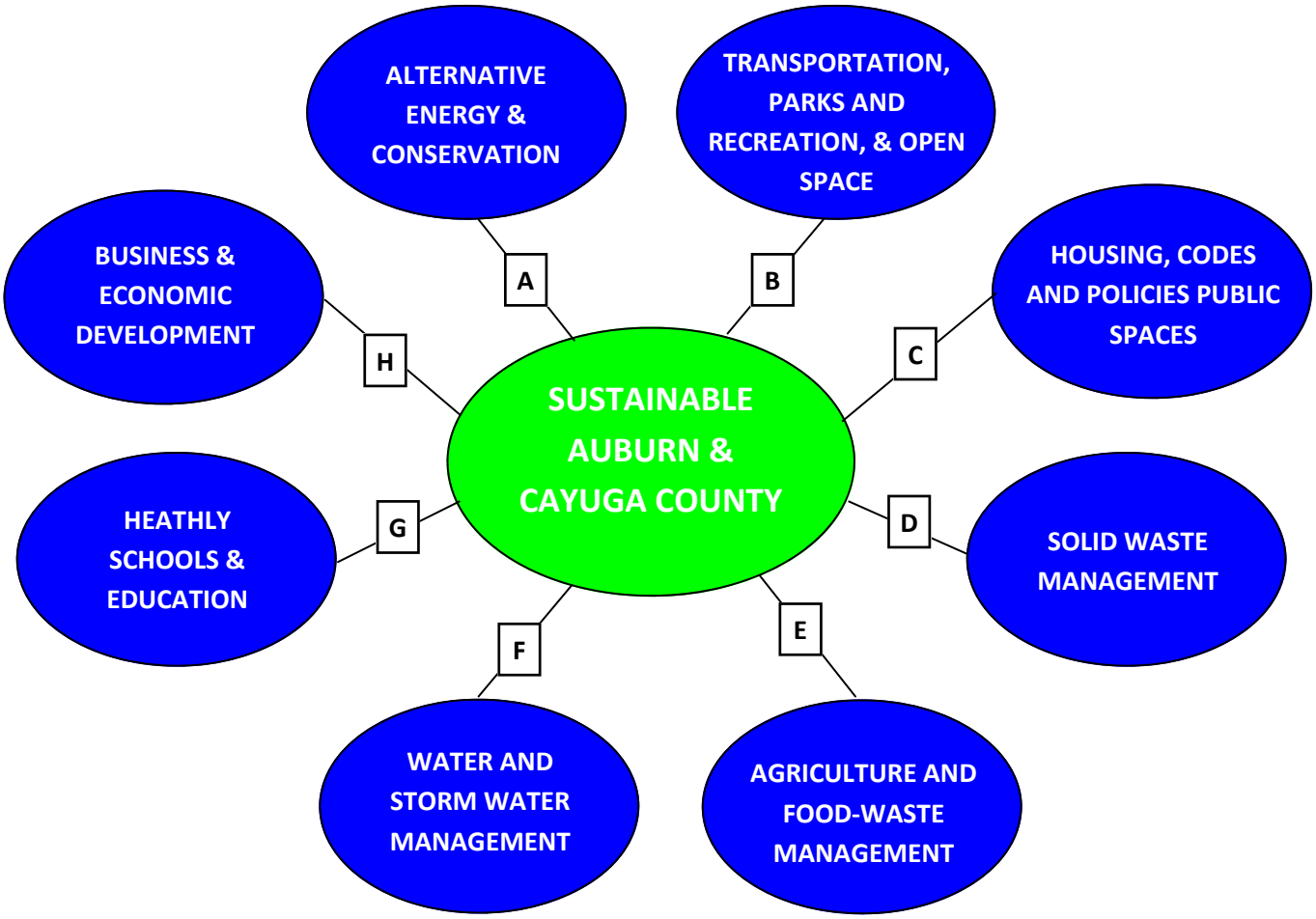
# City of Auburn and Cayuga County

***Developing the Vision and Plan for Sustainable Economic Development with Energy Efficient and Quality of Life Improvements***



# City of Auburn and Cayuga County Sustainability Task Force (Stakeholder Committee) List of Members as of May 2008

| | |
|---|---|
| Michael Quill | Mayor, City of Auburn |
| Roger Mills | Chairman, Cayuga County Legislature (2008) |
| Peter Tortorici | Chairman, Cayuga County Legislature (2009) |
| John Montone | Stakeholder Committee Chair, City of Auburn Municipal Power Agency |
| | |
| Bill Bastuk | Larsen Engineers |
| Dave Boyle | Assistant Superintendent of Finances, Cayuga-Onondaga BOCES |
| Terri Bridenbecker | Director, Cayuga County Chamber of Commerce |
| Nick Brindeek | Member, City of Auburn Municipal Power Agency |
| Bob Brower | Director, Institute for the Application of Geospatial Technology |
| Anthony DeCaro | Chief Water Plant Operator, Auburn Water Filtration Plant |
| Gary Duckett | Director, Cayuga County Parks and Recreation |
| Dave Gould | Sheriff, Cayuga County |
| Jennifer Haines | Director, City of Auburn Office of Planning and Economic Development |
| Jim Hotaling | Cayuga County Soil and Water Conservation District |
| Frank Howe | Sr. Eco. Dev. Planner, Cayuga County Department of Planning and Development |
| Dr. Daniel Larson | President, Cayuga Community College |
| Tim Lattimore | Past Mayor of Auburn |
| Greg Lattimore | Past Member, City of Auburn Municipal Power Agency |
| Mike Long | Director of Capital Projects and Grants, City of Auburn (2008) |
| Mike Luksa | Member, City of Auburn Municipal Power Agency |
| Steve Lynch | Director, Cayuga County Department of Planning and Development |
| Mary Ellen Mangino | Workforce Development Institute |
| Mike McQuay | McQuay International |
| Marie Montgomery | Energy Services Director, Cayuga Seneca Community Action Agency |
| Bruce Natale | Environmental Engineer, Cayuga County Department of Planning and Development |
| J.D. Pabis | Superintendent, Auburn Enlarged City School District |
| Mark Palesh | City Manager, City of Auburn |
| Mark Ranalli | Cayuga Wind Turbines |
| Luke Rybarczyk | Member, City of Auburn Municipal Power Agency |
| Dan Schuster | Executive Director, Downtown Auburn Business Improvement District |
| Christina Selvek | Director of Capital Projects and Grants, City of Auburn (2009) |
| Ram Shrivastava | Larsen Engineers |
| Mark Smith | President, Prime Energy Solutions, Inc. |
| Eric Sorrenson | Finger Lakes Radio Group |
| Mike Talbot | Landfill Supervisor, City of Auburn |
| Dennis Zach | Member, City of Auburn Municipal Power Agency |
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# Table of Contents


**1. Executive Summary** **4**

**2. Project Background**
- 2.1 History of Auburn **9**
- 2.2 Purpose of the Plan **11**
- 2.3 The Planning Process **13**

**3. Research and Data Gathering**
- 3.1 Municipal Sustainability Needs Assessment Survey **15**
  - A. Alternative Energy and Conservation **15**
  - B. Transportation, Parks and Recreation & Open Spaces **16**
  - C. Housing, Codes and Policies, Public Spaces **17**
  - D. Solid Waste Management **17**
  - E. Agriculture and Food Waste Management **18**
  - F. Water and Storm Water Management **19**
  - G. Healthy Schools **19**
  - H. Business and Economic Development **20**
- 3.2 Internal Document Review and DEA Gathering Summary of Sustainable Green Planning Needs Assessment Questionnaire **22**
- 3.3 Synopsis of Completed City and County Energy Projects **25**
- 3.4 Synopsis of Energy Projects in Planning and Design **28**

**4. Estimated Energy Demand for City of Auburn Public Buildings and Facilities**
- 4.1 Current Municipal Power Requirements **32**
- 4.2 Future Municipal Power Goals **35**

**5. Community Education, Vision and Consensus Building- Report and Recommendations of the Sustainable Economic Development and Energy Efficiency Summit - Summation of Focus Groups** **36**

**6. Task Force Capacity Building and Implementation of Goals and Schedule** **47**

**7. The Challenges: Opportunity and Constraints to Reliable Energy Resources and Sustainable Economic Development** **60**

**8. Framework and Greenprint for Action for Comprehensive Sustainable Energy and Development – 10 Recommendations and Suggested State Initiatives** **70**

**Appendices:**
- **Appendix A.** City of Auburn and Cayuga County Sustainable Energy Steering Committee Organizational Structure **77**
- **Appendix B.** Needs Assessment Questionnaire **78**
- **Appendix C.** Current Agencies, Organizations and Institutions Engaged in Sustainability **83**

# Part 1 City of Auburn and Cayuga County Comprehensive Energy and Sustainable Economic Development Master Plan

**Executive Summary**

The City of Auburn has been at the forefront of the efforts of New York municipalities to conserve energy, invest in renewable energy and develop a sustainable economy. These initiatives include the installation of geothermal energy systems at Memorial City Hall and the Auburn Police and Fire Station, energy conservation projects at Falcon and Casey Parks and an anaerobic bio-digester to create biogas to supply power to industries at Auburn's Technology Park.

The New York State Quality Communities Program is designed to fund innovative and multi-jurisdictional community planning and implementation strategies that link environmental protection, economic prosperity, health and well-being, equitable opportunities, sound land use practices, and energy conservation.
In December 2006, the City of Auburn received notification from the New York State Department of State that it had been awarded a Quality Communities grant to prepare a Comprehensive Energy and Sustainable Development Plan for the City of Auburn and Cayuga County. The goal is to bring together municipal governments, industry, utilities, educational institutions, labor, environmental organizations, community organizations, and the public to discuss issues and make recommendations, relative to eight energy and economic development topic areas. The plan will build on past projects, emerging new technological initiatives and principals of sustainability to optimize the benefits of renewable energy.
In February 2008, a diverse group of community leaders came together to form the City of Auburn and Cayuga County Sustainability Task Force. These public and private sector stakeholders agreed to begin the process of developing a short and long-term comprehensive plan for Energy and Sustainable Development. The task force reviewed and prioritized tasks as well as endorsed a two-phase participatory planning process – Data Gathering and a Community Energy Summit.

**Phase One - Data Gathering-** required an inventory and gap analysis of existing reports and research and the distribution of a written Needs Assessment Questionnaire to municipal and private sector leaders throughout Cayuga County. The questionnaire identified current energy management and sustainability practices of the agencies, towns and villages and policies or projects the respondents feel is needed. The questionnaire assessed six potential barriers to implementing the desired policies or projects; staff resistance, leadership, funding, incentives, staff education and community support.

Twenty-two entities, including nine Cayuga County towns and villages responded to the survey.

**Responses**

Cayuga County Agencies - The County provides residents with the opportunity to recycle household hazardous waste items, tires and electronics at scheduled times throughout the year and has established an inter-municipal phosphorous reduction program. Cornell Cooperative Extension of Cayuga County has developed an office-wide food recycling program using the compost during teaching demonstrations. The County would like to establish an office paper reduction and recycling program and complete the Cayuga County Public Utility Service Agency (CCPUSA) Centralized Bio-Digester Project.

City of Auburn Departments - The City of Auburn has completed a wide range of sustainable projects such as methane recovery at the City landfill. The City is undertaking an 11.6 million dollar project at the Auburn

Wastewater Treatment Plant to convert sludge to biogas power, which it will market to industry. Auburn High School envisions replacing non-renewable energy with wind power.

Towns and Villages - Most municipalities indicated they have residential recycling programs in place, have conducted facility energy audits and installed eye sensor lighting in municipal buildings. Some municipalities have made major capital investments such as the Village of Fair Haven, which has installed new storm and sanitary sewers.

Municipal leaders identified a variety of projects, programs or cost savings they would like to undertake to achieve the greatest sustainability benefits for the community. These included the need for sewers in the Town of Locke, the construction of new energy efficient LEED certified public facilities, using renewable energy sources such as a new town hall in the Town of Fleming, and a new wastewater treatment plant and compost facility in the Village of Weedsport. A number of (town/ village) leaders called for increased agricultural based renewable energy projects and inter-municipal cooperation to enhance smart growth planning.

When measuring barriers to these projects and other energy efficiency and sustainable economic development efforts, 21 of 22 respondents identified lack of funding, 9 cited the lack of incentives and 8 noted staff resistance and the need for community education.

**Phase Two – Community Energy Summit-** required the planning and implementation of daylong grass roots Community Energy Summit. The summit's primary goal was to deliberate and reach consensus on the policies and programs, which will serve as the building blocks for the Comprehensive Energy and Sustainable Development Plan.

On May 31, 2008, over 100 citizens gathered at Cayuga Community College to kick off the visioning and planning process. Community Energy Summit participants included municipal, business and labor leaders, teachers, environmental groups, and students from throughout the county.

The Summit established the foundation for mobilizing grass roots participation in the implementation of specific sustainable policies and projects in the following eight areas of sustainable planning:

1. Alternate Energy and Conservation
2. Transportation, Parks and Recreation and Open Spaces
3. Housing, Codes and Policies, Public Spaces
4. Solid Waste Management
5. Agriculture and Food Waste Management
6. Water and Storm Water Management
7. Healthy Schools
8. Business and Economic Development

The Summit resulted in the identification of 76 recommended actions in these eight areas of sustainability and ranked them according to high, medium and low priority. Each task force met after the Summit and further prioritized the recommendations resulting in 43 high priority actions.

**Top 20 Recommendations for Implementation and Task Force Capacity Building**

Working in conjunction with the City of Auburn and Cayuga County, Larsen Engineers synthesized the 42 high priority items and prepared a list of the following top 20 Challenges. An investment in these challenges is an investment in the future of the City and County. The Master Plan identifies the critical Opportunities and Constraints associated with each challenge.

1. Complete the City of Auburn Wastewater Treatment Plant "SHOVEL READY"Bio- digester Project.
2. Complete the Cayuga County Soil and Water "Under Construction" Community Digester Project.
3. Complete the Cayuga County Public Utility Service Agency "SHOVEL READY"Centralized Bio-Digester Project.
4. Initiate the City of Auburn Hydro Power Projects.
5. Create a Municipal, Low Interest, Self-sustaining, Green Revolving Loan Fund to Assist in Financing LEED Certified Projects, Demand Side Energy Management, Weatherization and Installation of Renewable Energy.
6. Educate and Encourage Government, Individuals and Business to Conserve Energy.
7. Develop a Marketing Campaign to Increase Centro-Bus System Ridership.
8. Encourage Business to Establish Programs to Increase Corporate Carpooling at the Workplace and Procurement of Alternative Energy.
9. Enhance Municipal Use of Alternative Fuel Vehicles.
10. Expedite Municipal Permit and Approval Processes for Sustainable Development, Redevelopment and Improvements.
11. Increase the Volume of Non-Recyclable Waste Tipped at the City Landfill.
12. Increase and Track Participation in Curbside and Drop-off Center Recycling Programs.
13. Establish Waste Reduction, Reuse and Recycling Programs in all County, City, Town and Village Facilities.
14. Encourage Corporate/Business Waste Reduction, Reuse and Recycling Programs.
15. Continue Participation in the P-Project, to Protect Local Watersheds and Promote Phosphorous Reduction in Fertilizers, Detergents and Dock Soap.
16. Encourage Use of Bio-retention Facilities and Use of Permeable Pavements in Parking Areas.
17. Build Awareness of the Environmental, Health and Academic Benefits of Healthy High Performance Schools among PTA, School Employees and Students.
18. Undertake a Cost Benefit Analysis of Replacing Non-Renewable Energy on Greater Auburn School District Campuses with Wind, Solar, Geo-thermal Heating and Cooling and Natural Gas.
19. Encourage Residents, Business and Government to Buy and Sell Local Products such as Produce.
20. Organize a Roundtable Discussion on "Pathways to Green Collar Jobs" Including Business, Academic Institutions, Unions and Government.

**Framework and Greenprint for Action for Comprehensive Sustainable Energy and Development**

A plethora of area agencies, organizations and institutions are engaged in efforts to make the City of Auburn and Cayuga County a national model for a Sustainable Community.

It is recommended that the City of Auburn Public Power Agency (APPA) and the Cayuga County Public Utility Service Agency (CCPUSA) serve as the coordinating entities for the umbrella Sustainable Steering Committee with the chairs of each agency serving as co-chairs of the Steering Committee. Each of the eight sustainable task forces would then coordinate activities under the umbrella of the Sustainable Steering Committee.

The Sustainable Steering Committee and designated staff's first task should be the preparation of a short term, 2009-2011 Greenprint for Action, focusing on implementing the top 20 recommendations. Each recommendation should have an associated strategic path to progress and to monitor progress. The master plan discusses the following 10 key tasks which may be included in the Business Plan.

1. The Sustainable and Smart Growth Planning Web Site
2. The City of Auburn Citizen Scientists' Volunteer Committee
3. County and City Employee Inter-Municipal Green Team
4. Green Revolving Loan Fund Study Committee
5. Address the Financial, Market, and Legal Issues Confronting the Cayuga County Public Utility Service Agency Centralized Bio-Digester Project
6. Seek Funding to Conduct a Mini-Hydro Feasibility Study and Demonstration Project
7. Identify a Point Person or Agency to Increase Centro-Bus Ridership
8. Establish a Performance Based-Shared Savings Relationship Between a Wind Development Company and the Greater Auburn School District
9. Prepare a Cayuga County Resource Workbook Summarizing Model Municipal Laws, Codes and Policies, which Encourage Sustainable Development and Renovation
10. Organize a September 2009 Roundtable on "Pathways to Green Collar Jobs"

To increase the capacity of the eight sustainability task forces to asset in these ten tasks, it is recommended that a follow up summit be organized and held in October or early November 2009.

# Part 2 Project Background

## 2.1 History

Cayuga County is located on the Eastern edge of the Finger Lakes Region, approximately 75 miles east of the City of Rochester and 75 miles west of the City of Syracuse. The County is primarily an urban- rural community of 81,764 residents with 47 percent residing in urban clusters and the remaining 53 percent in rural farm or non-farm areas. Farmland comprises 372 square miles or close to 54 percent of Cayuga County's 693 square mile land base. The county generates $128 million dollars each year from the sale of agricultural products and an additional $100 million in agricultural industrial support. The county's 28,939 dairy cows produce over 600 million pounds of milk annually.

Located within the Syracuse Metropolitan Statistical Area (MSA), the City of Auburn is the major business center and the County seat of Cayuga County. The population density of the City is 8.4 square miles or 3,400 residents per square mile; with a total population of 28, 000 residents. Nearly 25% of the city's workforce commutes daily to Syracuse. The Owasco River, the primary landscape feature, begins in the southeast quadrant of the City at the Owasco Lake and flows northwest through the City emptying into the Seneca River. . The city's commercial and business districts are clustered along St. Rt. 5 (Grant Avenue) and in the heart of downtown along W. Genesee Street.

Founded in 1793 by John L. Hardenberg, a veteran of the Revolutionary War, a community built up around Hardenbergh's mill and home. The new community became known as Hardenbergh's Corners. In 1805 the name changed to Auburn, taken from a Goldsmith poem, which describes "Sweet Auburn, loveliest village of the plain." Auburn incorporated as a village in 1815 and received its city charter in 1848.

The potential for water power along the Owasco Outlet encouraged mill and factory growth. Some of these industries included flour mills, sawmills, a brewery, a paper mill, and cotton factory. In 1816 the Auburn Prison (now Auburn State Correctional Facility) was founded and spurred additional development along the Owasco River. Commercial enterprises such as retail, service, and inn/tavern establishments soon followed. In the late 1830s the Auburn & Syracuse Railroad line was constructed and transects the northwest part of the City. Land in the outlying towns was cleared for agricultural industries consisting of vegetable and dairy production.

Historians use the year 1837 as a year of transition for Auburn. In addition to a nationwide financial panic, a devastating fire on Genesee and North Streets abruptly disrupted the era of initial development in the commercial district. The lack of a water connection to the Erie Canal dashed hopes that Auburn could become a city of multi-regional significance. Nevertheless, the industrial development along the Owasco Outlet continued incrementally. In the mid 1850's waterpower at the outlet was improved by raising the upper dam and removing obstructions. Hydro-power continued to be the main power source for industries well into the 1870s.

Increased industrial output spurred the development of new residential neighborhoods and the expansion of the central business district. These developments in turn created a need for citywide gas and water service lines, most of which were installed from the 1850's through the 1860's. Following the financial panic of 1873, Auburn renewed its industrial expansion. With the advent of steam and hydroelectric power, new industries located in the northwest sector of the city away from the Outlet. New state regulations abolished the contract system of prison labor. At the same time, the increased scale of local manufacturing required a larger workforce. The population of Auburn increased dramatically to nearly 35,000 at the turn of the 20th century as thousands of people from southeastern Europe immigrated to ethnic neighborhoods in northwestern Auburn. Much of the new housing was created through infill in existing neighborhoods, although some new suburban areas were also developed during this period. Infrastructure improvements included electric, telephone, streetcar, and publicly-owned water services – all in place by the early 1890s. Through economic ups and

downs, the industrial base of Auburn continued to expand and the city prospered with the population growing to 30,000 by mid-1930.

The urban renewal plans of the late 1960s and early 1970s had a dramatic impact on Auburn's downtown. Many older commercial structures were demolished and replaced with parking lots, gas stations, multiple-use buildings, pedestrian malls, high-speed roadways and high-rise apartment buildings.

Present major institutional facilities include the State Prison, a cluster of City and County buildings between James Street and William Street, the Memorial City Hall and the Chamber of Commerce building on South Street. Cayuga Community College located on the east side of the city, buffers residential neighborhoods from the primary commercial area on Grant Avenue. The municipal landfill and sewage treatment facility are located at the northwest corner of the city.

The traditional use of the Owasco River for industrial purposes has almost totally declined, although several municipal utility functions are currently served by water drawn from the river. Contemporary industrial land uses have located in the western portions of the city, between North and State Streets north of Pulaski Street and between West Genesee Street and the Owasco River at the western edge of the city.

Public parks and playgrounds are well distributed throughout the city. The largest and perhaps the most active park is Casey Park. Other sizeable parks are Hoopes Park and Clifford Park. Outside the city limits at the Owasco Lake inlet, Emerson Park (owned and operated by the Cayuga County Parks and Recreation Commission) is a major regional park used extensively by both local residents and tourists.

Today the City and Cayuga County are embarking on a visionary plan to achieve energy independence, become a leader in energy conservation, attract new business, and become a national model for sustainable smart community planning.

## 2.2 Purpose of the Plan

The intent of this plan is to create a vision for the City of Auburn and Cayuga County to achieve sustainable energy and economic development. The City already exhibits many of these sustainable traits in a wide scope of areas that put it in a league with few other municipalities in New York or possibly the United States. Furthermore the City and Cayuga County have demonstrated the capability to develop additional policies and projects to maintain its energy and sustainable economic growth leadership role.

The purpose of this plan is to provide a comprehensive holistic approach to address the diverse range of issues and policies, which lead to integrated solutions for further sustainable economic, energy, and environmental performance enhancements for the City of Auburn and Cayuga County. The plan links together eight interrelated sustainable traits and opportunities through a collaborative and synergistic approach. These eight sustainability topic areas address the following issues facing municipalities across the nation.

**Achieve energy independence**

Auburn hopes to achieve energy independence by diversifying and increasing the power output of its alternative energy sources. Auburn already utilizes geothermal, hydro-electric, methane, and natural gas that is all produced in Auburn as sources of electricity and heat. It hopes to expand each of those areas as well as adding solar and wind to their energy production portfolio.

**Energy Conservation**

Equally important to producing clean energy is conserving what energy is used. Auburn and Cayuga County

intend to become statewide models in instituting programs to help the state reach its goal of a 15% percent reduction in energy consumption by 2015. Recycling is one of the best ways to reduce waste and provide new materials and energy for production. One recycling program which Auburn already uses is its methane recovery program. Methane is recovered from the landfill and mixed with natural gas in the sludge incinerator at the Wastewater Treatment Plant. Other plans for conservation include expanded recycling programs, automatic shutoffs, increased alternative-energy vehicle use and installation of LED street and traffic lights. Smart growth is the most practical and fundamental way to reduce the use of carbon fuels.

**Attract new business**

Auburn is home to several companies that are leaders in green technology. Nucor Steel is a leader in recycling and environmental stewardship. McQuay International produces a geothermal heat pump system that is used at Memorial City Hall, as well as, around the world. Becoming a sustainable city with a reputation for green technology and affordable power assures that these companies stay in Auburn as well as attracting new green companies. These efforts will keep and create local well paid "green collar jobs" in research, design, manufacturing, construction, installation, retrofitting, and maintenance.

**Community Responsibility**

Sustainability can not be just an idea proposed and put in place by government. Sustainability requires individual and group initiatives and is an ongoing, evolving process. Recycling programs, educational and informational sessions, public summits, weekly meetings, and task forces are essential for sustainability to work for the whole community. These processes have proven to evoke a feeling of involvement and commitment to the community.

## 2.3 The Planning Process

The City of Auburn and Cayuga County, in conjunction with Larsen Engineers, designed a planning process intended to enhance grass roots discussions with a broad range of sustainability stakeholders including government, business, labor, education and environmental and community organizations. The Auburn Municipal Power Agency and Cayuga County Public Utility Service Agencies provided the initial foundation for the stakeholders and formation of the City of Auburn and Cayuga County Sustainability Task Force.

Members of the Quality Community Sustainability Task Force are recognized in the Prelude to the Report.

The Sustainability Task Force held its first meeting on February 8th, 2008 at Auburn City Hall and agreed to the following eight interrelated Traits of Community Sustainability, which would be the focal points of a joint City and County Action Plan for Comprehensive Energy and Sustainable Development. These action areas are:

A) Alternate Energy and Conservation
B) Transportation, Parks and Recreation and Open Spaces
C) Housing, Codes and Policies, Public Spaces
D) Solid Waste Management
E) Agriculture and Food Waste Management
F) Water and Storm water Management
G) Healthy Schools
H) Business and Economic Development

The Sustainability Task Force agreed that these action areas would be the focal points of the Community Energy Summit held in May, 2008 at Cayuga Community College. A sub-committee was formed to plan and manage the summit.

The Sustainability Task Force also approved a data-gathering plan, which had been submitted to New York State as part of the grant application. The intent of the data gathering was to inventory and analyze existing resources, opportunities, and constraints on a countywide basis and use them to guide the plan and the activities for the eight action areas. The implementation of the data gathering involved the following tasks:

1. The preparation, distribution, and analysis of a "Sustainable Green Planning Needs Assessment Questionnaire". The questionnaire was distributed to the following individuals and organizations:

   A) Each member of the Sustainability Task Force
   B) Directors of City and County Departments, Agencies or Authorities
   C) Town Supervisors and Village Mayors
   D) Academic institutions such as the Cayuga-Onondaga BOCES, Cayuga Community College, and Auburn Enlarged School District.

   The questionnaire was also posted on the City, County and Cayuga County Chamber of Commerce web sites for community feedback.

2. A matrix summary of the key questions and responses was prepared and then synthesized and correlated to associate with each of the eight sustainable action areas. A copy of the questionnaires and summary matrix for key questions is included in Appendix B.

3. The collection and review of all existing reports, studies, legal documents, laws, and regulations, as they pertain to Sustainable Economic Development and Energy Efficiency, are identified in Appendix D.

The Sustainability Task Force met throughout the months of January through May, 2008 to plan for the Community Energy Summit "Developing the Vision and Plan for Sustainable Economic Development with Energy Efficiency and Quality of Life Improvements". Members of the Sustainability Task Force continued to guide the planning process by serving as chairperson or moderator for each of the eight sustainability topic areas.

# Part 3 Research and Data Collection

**3.1 Municipal Sustainability Needs Assessment Survey**

To assist in measuring and assessing the current sustainability efforts of municipal agencies throughout the city and county, a Needs Assessment Questionnaire was prepared by Larsen Engineers. A copy of the questionnaire appears in Appendix A. The questionnaire was sent to the director of all City and County departments or agencies. The questionnaire was also sent to each Town Supervisor and Village Mayor within Cayuga County. Follow up phone calls were made to each individual, both to serve as a reminder, and also to discuss the questions personally. Twenty two entities, including nine towns and villages, responded to the questionnaire. A list of the respondents appears in Appendix B.

The results have been synthesized and categorized according to the eight sustainability topic areas agreed to by the City of Auburn and Cayuga County Sustainability Task Force.

**A. Alternative Energy and Conservation**

Municipalities in Cayuga County are beginning to take the crucial first step in energy management, conservation. Cayuga County has completed an audit of County Buildings; the Town of Locke has also completed an audit of municipal buildings and Port Byron has conducted a feasibility study for energy related park improvements.

A number of energy conservation measures have been initiated by many local governments. The Cayuga County Sheriff's Office has upgraded all heating and ventilation in the County jail and opened two new satellite patrol offices in the north and south ends of the County, reducing patrol vehicle gas usage. Cayuga County Parks and Trails has winterized and installed programmable thermostats in the Emerson Park Pavilion. Cornell Cooperative Extension of Cayuga County is utilizing new window treatments to decrease glare and heat loss from single pane commercial windows. The City of Auburn has converted to energy efficiency lighting.

Towns and villages across Cayuga County are also engaging a range of energy conservation and smart planning efforts. At the Village of Weedsport's Department of Public Works a wood stove has been installed to heat the facility and eye sensors have been placed in the DPW yard. The Village has also installed high efficiency blowers at the WWTP. The neighboring Village of Brutus is sharing equipment with the Town of Weedsport and looking into a Shared Municipal Services grant to combine the two village courts into one building. The neighboring Town of Sterling and Village of Fair Haven's Public Works Department share a roller and grade. The Town of Locke is investing in conservation projects at the Town Hall including improvements to furnace, roof and windows. Port Byron has invested in an energy efficient boiler and installed new energy efficient lights in all municipal buildings. In other areas of the County a number of creative ideas are being discussed. For example: the Town of Niles is examining micro computer technology to increase energy efficiency and reduce cost. The City of Auburn has invested in plethora of alternative energy projects as described in detail in this plan. The City sees geothermal energy as a clean, cost effective tool for replacing brown power with green energy. Geothermal is utilized at Memorial City Hall and the Fire and Police Headquarters at 23 Market Street and is being discussed for Station #3 at 176 Clark Street. The City is capturing methane from the municipal landfill and reusing the gas to power the incinerator at the City Wastewater Treatment Plant.

The responses demonstrate that there is considerable commitment and interest in planning for and developing new alternative energy projects. However, as the chart on the following page indicates, funding is the primary barrier.

Five current and future priorities for the City of Auburn, aimed at further energy independence and carbon reduction, include:

*The construction of a Bioenergy Facility, possibly including an anaerobic sludge digester to create more methane for energy production.

*Replacing all 100 watt mercury vapor street lights with high pressure sodium or LED lights.

*Converting motor drives at the Wastewater Treatment Plant and Water Treatment Plant to variable frequency drives.

*Development of additional hydro sites along the Owasco outlet and using the generated power in the City.

*Drilling a gas well at the city landfill.

Cayuga County, meanwhile, would like to study ways to further coordinate and partner with the City on renewable energy projects. The County hopes to enhance the development of the CCPUSA abilities to buy and sell renewable energy using CCPUSA's distribution system. The County Sherriff's Department is researching ways to reduce the fuel in public safety buildings and patrol vehicles. The county sees value in replacing rim lights with fluorescent bulbs in county parks and utilizing solar or geothermal to heat the park pavilion.

Cornell Cooperative Extension of Cayuga County would like to obtain funds to install a boiler heating with zone control, replace inefficient interior and exterior lighting and obtain dual sourced or alternative fuel source vehicles.

In addition to the City of Auburn Power Authority and Cayuga County Public Utility Service Agency, other alternative energy and conservation support and advocacy organizations exist across Cayuga County. These include CASH: Citizens of Auburn for Solar and Hydrogen which builds awareness on these sources of energy as well as the value of energy audits and proper weatherization. Cayuga Seneca Community Action Agency, which manages weatherization assistance and Empower program, and the CEPREE: Consumer Education Program for Residential Energy Efficiency, a program of Cornell Cooperative Extension.

**B. Transportation Parks and Recreation and Open Spaces**

While communities in Cayuga County appear cognizant of the relationship between recreation and open spaces, there was limited mention of this topic in the questionnaires. Cayuga County Parks and Recreation Department envisions undertaking three projects to enhance Emerson Park: 1) Renovation of the park pavilion, 2) Creation of a destination playground at the park and 3) Development of a nature center with educated volunteer staff.

The Village of Weedsport has resurrected a beautification committee to plant new trees and flowers throughout the village and organize clean up days. The Town of Niles is creating a new recreation area and the Village of Fair Haven is investing in a new senior citizen center. The Village of Port Byron indicated it is undertaking a study of necessary park improvements.

Green Fleet opportunities were a subject of priority among the County, City, towns and villages. Cayuga County is exploring the costs and benefits of transferring to alternative fuel vehicles. The County would like to work with the state to develop a strategy which will link trucks to biodiesel or alternative fuels along I-90

and NY Rt. 34. Cornell Cooperative Extension of Cayuga County sites a lack of funding sources for dual fuel sourced or alternative fuel vehicles as a major barrier to a county-wide transition.

Cayuga County officials believe county employees and the general public need increased education on the environmental benefits of car pooling.

The Cato-Meridian High School Sunpacer Team builds demonstration solar-assisted electric cars and has successfully completed in Tour Del Sol for many years.

The City of Auburn is in the process of making a transition to alternative fuel vehicles. The public works, solid waste and fire departments are discussing changing fuel sources or switching to alternative fuel vehicles. The City has also adopted a policy of purchasing only Tier 3 vehicles, or better, to reduce carbon emissions.

**C. Housing, Codes and Policies, Public Spaces**

The analysis of questionnaires indicated municipalities have not begun to devote substantial discussion to policies and codes which will encourage the development or redevelopment of LEED designed buildings and residences. The Town of Brutus is exploring a new green town hall.

Cornell Cooperative Extension of Cayuga County suggests that a task force be formed to create a Sustainable Library as a resource of information for local businesses and homeowners to tap into. The sustainable library would provide information on Leadership in Environment and Energy (LEED) guidelines and identify grants, loans and tax credits to help support LEED designed projects.

**D. Solid Waste Management**

The City of Auburn is responsible for the collection and disposal of household solid waste. The City of Auburn landfill #2 was constructed in 1993 and is the primary facility for processing mixed municipal solid waste generated in the City and surrounding towns and villages.

In 2007 a total of 73,840.93 tons of solid waste was disposed of at the landfill or an average of 261.85 tons per day. This waste stream includes 59,734.04 tons of mixed residential, institutional, and commercial solid waste and 11,266.31 tons of construction and demolition debris.

The City landfill captures methane gas produced at the landfill and is piped to the Wastewater Treatment Plant and burned in the sludge incinerator.

The City offers a voluntary three step residential curbside recycling program. Each week the city collects one material: paper; including cardboard and corrugated, plastic and metals.

Towns and Villages across Cayuga County use a variety of approaches for collecting and disposing of source separated recyclables and mixed solid waste. The Town of Niles and the Villages of Moravia, Cayuga, and Union Springs assume the responsibility for the curbside collection of recyclables and mixed waste. The following municipalities rely on residents to dispose of their own recyclables and waste at public and private transfer stations or recycling drop off centers: The Towns of Conquest, Fleming, Ira, Ledyard, Owasco, Scipio and Victory, as well as, the Villages of Meridian and Victory. Recycling centers also exist in Aurelius, Martz and Montezuma.

Cayuga County Department of Planning and Development, in conjunction with Cornell Cooperative Extension of Cayuga County have been increasing efforts to recycle hard to handle waste. Household hazardous waste collections were held in the Fall of 2003, 2005, 2006, 2007 and 2008. The institutions also have undertaken home electronics collection days in the Spring of 2003, 2004, 2006 and 2007. Additionally the County sponsors a tire round up once each year.

Respondents to the questionnaire indicated a need to increase waste reduction and reuse programs, as well as household composting. The Cornell Cooperative Extension holds a variety of on site homeowner composting seminars and the County hopes to secure a grant to procure backyard lawn and food waste composting units for homeowners.

The City of Auburn landfill is facing competing challenges from private haulers serving towns and villages who choose to utilize the Seneca Meadows landfill. These challenges are discussed in Part 7 of this report.

**E. Agriculture and Food Waste Management**

In 2006 Cayuga County Department of Planning and Development, Cayuga County Soil and Water Conservation District Office and Doug Young (a local farmer) initiated a model Community Digester Project. This project will utilize an anaerobic digester to produce biogas from cow manure, with the gas being sold to the County to heat the Public Works facility on County House Road. The digester has received a NYSDEC Part 360 permit and construction is underway. However, due to inflation, the project is currently at a stand still. This is a priority "SHOVEL READY" project which Cayuga County would like to complete in 2009.

In addition to the Community Digester project, the Cayuga County Department of Planning and Development, Cayuga County Public Utility Service Agency (CCPUSA) and farmers across the county, are working towards a regional approach to dairy farm waste management. Farmers participating in this program would transmit the biogas produced from their on site digesters to a centralized location sited at the Cayuga County Industrial Park. The CCPUSA would purchase the biogas from each farmer utilizing a formula based on quantity of gas produced at each farm. Funding and necessary staff to coordinate and negotiate agreements with farmers have hindered the progress of this project.

The Town of Brutus indicated it is in the process of developing a contract with the New York State Department of Agriculture and Markets to establish an Agricultural Protection Plan, as part of a new comprehensive plan. The Town anticipates it will take approximately two years to complete the plan.

**F. Water and Storm Water Management**

The Cayuga County Department of Planning and Development, working in conjunction with the Cayuga County Water Quality Management Agency and the County Soil and Water Conservation District, has established a Phosphorous reduction program, known as the P-Project. The multi-county joint educational initiative includes a full time Watershed Inspector and focuses on the Oswego River and Owasco Lake watersheds to minimize unnecessary introduction of additional phosphorous loading. The project also identifies individual property owner reduction strategies, including soil testing. Following soil analysis recommendations are made to property owners including the use of vegetative buffers and reduction in utilization of (0)-P chemical fertilizers, particularly by those with direct waterfront shore.

The County's future priorities include increased public education on storm water reduction including water conservation, rain gardens and alternative sustainable site design.

Municipal infrastructure upgrades are taking place at the town and village level. The Village of Fair Haven has recently installed new sanitary and storm sewers. The Town of Weedsport hopes to secure funding for a new wastewater treatment plant to improve operational efficiencies.

**G. Healthy Schools**

The Auburn Enlarged School District has undertaken a number of healthy high performance school facility management initiatives to improve the school's indoor environment, the performance of students and faculty, and achieve cost savings.

To address interior facility design and operational issues the district has undertaken energy efficient window replacements, the weatherization of all air leaks, and the installation of motion sensors in all classrooms. Air filters in every ventilator unit and air handling system district wide have been upgraded from fiberglass to high efficiency pleated units. Every school building now has a digital readout system to improve the efficiency of temperature control in each classroom. The state-of-the-art-system enables the district's Superintendent of Buildings and Grounds to monitor the temperatures in every district room.

In addition to the physical improvements that address in-door air quality, the school district has also made a consciences effort to utilize green cleaning products including green chemicals, micro fiber mops and cloths, and HEPA vacuum cleaners.

The district has made a substantial long term investment at the Auburn High School replacing three outdated co-generator units and installed modern turbo car compressors to chill the buildings water system. East Auburn Middle School has converted an existing geothermal well to a gas well and connected it to a new co-generator and steam boiler. The unit converts gas into electricity, and the excess heat it produces is reused to heat water and supplement the school's heating system. Further, the boiler supplements the use of three larger boilers during the winter.

Currently the district is exploring the utilization of three new sources of alternative energy: wind, geothermal heating and cooling and the exploration of natural gas wells. The district is studying the costs and benefits of installing five wind turbines to provide renewable energy to the high school. The district will be applying for a grant from the New York State Energy Research and Development Authority to assist in financing the turbines and possibly solar energy.

Smaller school districts within Cayuga County have stimulated the further practice of healthy, sustainable school facility management.

The Union Springs Central School District, which historically purchased fuel from NYSEG, has now supplemented the fuel with energy from gas wells for the high school, middle school and AJ Smith Elementary School and bus garage. The district has embarked on a sensible quality community transportation program transporting students to AJ Smith Elementary School from Cayuga Elementary School on four shuttles rather than seven. This cooperation has produced a savings of 10,248 miles and 1,138 gallons of gasoline each year. At the end of the school year, AJ Smith Elementary reduced 11 buses to six buses on the reverse run. This produces a savings of 16,104 miles and 2,301 gallons of gasoline each year. The energy and economy minded district has also reduced one athletic bus run and merged with the Southern Cayuga District for runs, and have agreed to split some of the away games.

Since 2006, the Port Byron School District has invested close to two million dollars to upgrade heating and air handling systems, install energy efficient plumbing, and replace indoor and outdoor lights with compact florescent bulbs.

The Southern Cayuga Central School District hopes to study and embark on traditional and new approaches to achieving efficiencies of energy and economy.

The Cayuga-Onondaga Board of Cooperative Educational Services (BOCES) has undertaken a landmark project. The 43.5 million, 192,000 square foot campus will soon receive Leadership in Energy and Environmental Design (LEED) certification at the gold level, the second highest ranking. The school has installed 220 geothermal wells to provide heating and cooling radiant heat in the day care center, 210 windows for natural day lighting, electronic ballasts and motion sensors in each room.

The school has laid plans to possibly achieve the highest LEED ranking, platinum, in the future. The school has applied for a $6,000.00 NYSERDA grant to cover 50 percent of the cost of a natural gas fueling station. It also has submitted a grant request to the US Department of Energy Clean Cities program to pay for 75 percent of the cost of two alternative fuel vehicles. The Clean Cities program goal is to reduce petroleum consumption by two and a half billion gallons by 2020. Future plans may involve the installation of solar panels and wind turbines.

**H. Business and Economic Development**

The City of Auburn Department of Planning and Economic Development indicated a desire to partner with other levels of government, educational institutions, labor and the private sector to establish a program which will enhance the growth of local green business. This would include a connectivity strategy linking potential green enterprises with research institutions, technical experts and funding to determine the competitiveness of the business or ways existing green companies can increase their markets. Cornell Cooperative Extension of Cayuga County suggested a similar program which would also identify green employment training requirements and link companies with potential training opportunities at BOCES, community colleges, and with labor.

A member of the Auburn Municipal Power Agency noted the value of educating area manufacturing companies on the use of alternative energy, remanufacturing and waste reduction programs. For example Hammond and Irving, a local steel company is implementing a heat recovery project that would heat 24,000 square feet of manufacturing with waste heat has been completed.

**3.2 Internal Document Review and DEA Gathering**

**Summary of Sustainable Green Planning Needs Assessment Questionnaire**

**Summary of Question #11: What barriers do you foresee to implementing Green Initiatives in your Agency or Department?**

| Responder | Staff resistance | Leadership | Funding | Incentives | Staff Education | Community Support | Other |
|---|---|---|---|---|---|---|---|
| Town of Brutus | | | X | | | | staff resources |
| Village of Locke | | | X | | | | |
| Town of Fleming | | | X | | X | X | |
| Village of Niles | X | | X | | | | |
| Town of Meridian | | | X | X | X | X | |
| Village of Weedsport | | | X | X | | | |
| Village of Geneva | | | X | | X | | |
| Village of Port Byron | | | X | | | | |
| Village of Fair Haven | X | | X | X | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cornell Cooperative Extension of Cayuga County | | | X | X | | X | |
| Auburn Municipal Power Authority | | | X | | | X | |
| Cayuga County. Planning Department | | X | X | | | | |
| Auburn School District | X | | X | X | | | **SED FUNDING** |
| Co. Econ. Dev. | | | X | X | | | **job positions** |
| City of Auburn Office of Planning & Economic Development | | | X | | | | |
| Cayuga County WQMA | X | X | X | X | X | X | |
| City of Auburn Fire Department | X | | X | | | ? | |
| City of Auburn Solid Waste Department | X | | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| City of Auburn Public Works Department | **X** | | | | | **X** | |
| City of Auburn Engineering Department | | | **X** | **X** | | | **lack of staff** |
| Cayuga County Sheriff's Office | | | **X** | | | | |
| Cayuga County Parks and Trails Department | | | **X** | | | | |
| *TOTAL* | 7 | 2 | 21 | 9 | 5 | 7 | |
| *PERCENT* | ***0.32*** | ***0.17*** | ***0.82*** | ***0.36*** | ***0.18*** | ***0.32*** | |

## 3.3 Synopsis of Completed City and County Energy Projects

### 3.3.1 Auburn Municipal Public Power Agency

The Auburn City Council through Local Law #1 of 2004 created the "Auburn Municipal Power Agency." Proposed by Mayor Timothy Lattimore, 83% of the voters in a referendum supported approval of this new agency. The Power Agency allows the City to buy and sell energy and to develop alternate energy systems. This will make it possible for the City to secure cheaper energy to attract and retain businesses and to reduce the City's energy cost. The Agency has already enabled the City to substantially lower energy costs through wholesale power and natural gas purchase with major suppliers, and is actively working on new projects, which will bring additional benefits.

### 3.3.2 Energy Audit

The City is working with the New York Power Authority (NYPA) to complete a comprehensive energy audit of all of the City's primary facilities and buildings. This will allow the City to apply for additional NYSERDA and other grant funding to assist with implementation of additional cost saving measures. NYPA will finance the projects and the City will pay for the improvements with energy savings. After repayment of the 5-15 year loans, the City will receive 100% of the project savings.

### 3.3.3 Geothermal Water-to-Water Heat Pump Systems in Memorial City Hall

Designed by the Boston Architectural firm of Coolidge, Shepley, Bullfinch and Abbott, City Hall is on the National Register of Historic Places. The geothermal installation required design sensitivity for the Council chambers and public spaces to insure the historic integrity of the building was maintained. McQuay International (4th largest HVAC manufacturer in the world) with a production plant in Auburn, New York, provided the geothermal systems. The purchase of the McQuay system helped strengthen the Auburn economy and supported local workers and Auburn manufacturing jobs. The New York Conference of Mayors (NYCOM) awarded the City a Local Government Achievement Award in 2004 for this installation, which recognized the Auburn City Hall as the first to use a geothermal system.

### 3.3.4 Methane Gas Recovery Project

The methane gas produced by the waste in the City of Auburn Landfill is collected before it escapes into the environment. Once collected, the gas is piped to the Wastewater Treatment Plant and burned in the sludge incinerator. This methane recovery system ($1.8 million) reduces the City's purchase of natural gas. In the first year of operation, the City saved approximately $800,000 in natural gas costs. A $904,000 grant from the New York State Environmental Quality Bond Act reduced the City investment, resulting in a one-year payback for this system. In 2002, the City received a NYCOM Local Government Achievement Award for this innovative project.

### 3.3.5 Police and Fire Department Building HVAC Project

With the assistance of the NYPA, the City has designed a new Geothermal HVAC system for the City Police and Fire Department Building. The project was completed in October of 2007. A NYSERDA grant has been awarded for this project, which will use the McQuay Water Source Heat Pump made in Auburn, New York. In addition, NYPA has funded an energy conservation program that will save energy in about 12 City facilities including the Wastewater Treatment Plant, Water Filtration Plant, the Public Works Garage, Casey Park/Falcon Park recreation facilities, and more. The energy savings will pay for the improvements, including the Police & Fire Geothermal system, making this $5.35 million dollar project economically viable. The energy savings are estimated at $240,000 per year.

### 3.3.6 CREBS IRS Funding

In 2007, The City of Auburn applied for a Federal interest subsidy program through the Internal Revenue

Service (IRS) known as the CREBS program. Investors that purchase the CREBS renewable energy bonds receive tax credits that create an interest subsidy, reducing the City's long-term cost of borrowing. ECO Technology Solutions, Inc., a consulting firm acting on behalf of the City, has assisted with these applications, (1) for the methane recovery energy generation plant and (1) for the sludge digester.

**3.3.7 Natural Gas Purchase Agreement**

In 2007, the City evaluated the existing natural gas purchase contract with its vendor–O.C.M. BOCES. With the Katrina event, the natural gas expenses had dramatically increased and the rates were extremely high. The City's Wastewater Treatment Plant sludge incinerator is a very high natural gas user and as a result of the price increases the operation became unprofitable. A bid process was under taken to find a lower cost provider of natural gas. A new vendor, NYSEG Solutions, was selected. Based on historical billing, the new agreement will save $300,000 per year.

**3.3.8 Downtown Street Lighting**

In 1993 the City of Auburn began working with NYSEG to improve the deteriorated lighting system. NYSEG owned the wire within the City's conduit; the City owned the street lighting poles and NYSEG provided the street light fixtures, energy and maintenance. The City purchased the residual value of the wire and lights, bid the installation of new decorative streetlights, provided the maintenance and are buying the electric power from NYSEG. The $700,000 investment captures cost savings of over $100,000 per year. As the City continues to reconstruct the major streets, additional historic streetlights are being added. South St, Genesee St. and East Genesee St. are examples were the new lighting has made the community more attractive. Currently, the City is investigating the purchasing of the balance of NYSEG street lighting system.

**3.3.9 Geothermal Well**

In 1984, the former Mayor Lattimore approached NYSERDA and the US Dept. of Energy to fund a deep Geothermal water injection well. This first deep Geothermal well, east of the Mississippi River, was installed to a depth of over 5,200 feet. In 1991, this well was covered to use the natural gas that was in the well to heat the East Middle School. The current owners (Auburn Enlarged Central School District) have recently begun to increase the efficiency of this well and expand uses.

**3.3.10 Casey Park/Falcon Park Development Project**

In 2002, NYSERDA funded an engineering study to implement energy conservation at Casey and Falcon Parks. Several of the smaller improvements have been completed as a result of this conservation program. Coupled with a grant from NYS Senator Nozzolio, the Casey Park Ice Rink was recently enclosed and a desiccant system installed. The next major improvement is the replacement of the ice making equipment. A study (2/2006) has been done to build a methane gas/natural gas chiller for the ice production. The City plans to install a new underground piping system that would connect the City's methane gas plant across the street to the chiller. With the installation of an electric generator, Casey Park and the Falcon Park baseball stadium could be set up for power generation. A new request for NYSERDA assistance is planned. The capital cost for the chiller is estimated at $400,000 plus the cost of the piping for the gas connections.

**<u>3.4 Synopsis of City of Auburn and Cayuga County Energy Projects in Planning, Design, or Construction Phases</u>**

**3.4.1 City of Auburn Bioenergy Facility**

This project will not only benefit the environment, but also will provide methane gas to power electric generators that will supply electricity to nearby Auburn Industries at the "Technology Park." The low cost electricity will help the Auburn industries to compete in today's market, while creating new jobs for local residents. The project's feasibility study was completed through a jointly funded NYSERDA grant with

Cayuga County. ECO Technology Solutions (ECOTS) was the consulting firm for the feasibility study. As a result of this study, Cayuga County recently received a $1,000,000 NYSERDA grant to assist with the construction of its first bioenergy (digester) facility. Engineering began in 2006.

The project will utilize wastewater sludge from the Auburn Wastewater Treatment Plant as the source of methane. In addition, the City will process other communities' sludge (disposal fee) to expand the capacity of the plant. Former NYSERDA Chairman Peter Smith has announced a $1,000,000 grant for this unique project. Former Congressman Sherwood Boehlert announced an $891,000 grant and U.S. Senators Hillary Clinton and Chuck Schumer announced another $241,000 for a total of $2,132,000. The project cost is estimated to be $11.6 million and will bring nearly $800,000 in benefits from lower operating expenses and $1.7 million in additional revenues which will result in a net benefit of $2.5 million for the City of Auburn. Senators Schumer and Clinton have also included another $500,000 in assistance in a Senate appropriations bill proposed for the 2008 federal budget.

**3.4.2 Cayuga County Public Utility Service Agency Created Bio-Digester Project**

This project is currently being coordinated by the Cayuga Renewable Energy Inc. The estimated 60 million dollar project will involve the coordinated efforts of 14 county dairy farms utilizing 10 on site digesters. Participating farms will transport bio-gas by connecting into new laterals encompassing 20 miles of piping and carrying the gas to a central pipeline. The central, 12 inch, pipeline will transport the digested bio gas from the O'Hare Farm to the County Technology Park, 2 miles to the south. It is projected to result in the reuse of waste from 20,000 to 25,000 cows annually, while producing and selling 1.5 million deca-therms of power each year. The Cayuga County Public Utility Service Agency will be responsible for managing the sale of distribution of this low cost green power to industrial and commercial and large residential customers.

**3.4.3 Business Development Opportunities**

ECOTS has assisted the City of Auburn in developing a potential partnership with a company to build, own and operate the power generation facility utilizing the City's landfill methane gas and sludge digester gas to produce 3 megawatts of electric power and a similar amount of hot water. The proposed project would include a power purchase agreement with a long-term purchase price structure for the City. The electricity will operate the entire Wastewater Treatment Plant, and the excess power will be sold by the Auburn Municipal Power Agency to the businesses located at Technology Park.

**3.4.4 Advances in the Wind Development Industry**

In 2006, the City began working with Cayuga Wind Turbines to assess market opportunities for a new wind technology. With the increased commercialization of large-scale wind renewable energy projects, the intermediate size wind generation units are just coming into the marketplace. Through the assistance of Cornell University's Johnson School, an evaluation and market strategy was completed. Subsequently, the City of Auburn received a $76,600 grant from the U.S.D.A. Rural Business Enterprise Program to continue this effort. The ultimate goal is the location of a manufacturing plant in Auburn to produce the intermediate scale wind turbines, blades and towers.

**3.4.5 Hydroelectric Sites**

NYPA is currently evaluating the existing City hydroelectric sites, as well as some additional potential sites in the City for new generation. NYSERDA has also begun an evaluation to determine if predevelopment "Low flow – low head" hydro generation is feasible for the sites. The City has received engineering services study proposal of the entire Owasco River and anticipates NYSERDA assistance in the feasibility study and final project. The City still needs to review the Federal Energy Regulatory (FERC) requirements, which may be minimal if the power is used on-site rather than transmitted to the grid. It is estimated that the Mill Street Dam will cost $1.7 million and the new State Dam to power the City's water filtration plant will cost $1.5

million. NYPA has recently completed an initial hydro evaluation and it appears that the payback period is approximately 13 years without government grants. The Dunn & McCarthy hydro site is estimated at $1.9 million with a 13.3 year without grants.

**3.4.6 Gas Exploration**

The City of Auburn applied unsuccessfully in 2005 for a $100,000 NYSERDA grant to drill a new natural gas well at the 215-acre landfill site for additional capacity. Dr. Joseph Robinson, professor emeritus of Syracuse University's Geology Dept., worked on the initial gas well and was part of the grant team for this estimated $500,000 project. Although the initial grant was unsuccessful, the City and NYPA are discussing joint development of the project. The future gas well is near the location of two major transmissions gas lines that cross New York State. The City already has plans to submit an application for a large grant in the near future. NYPA may assist in the development of a gas powered generation plant once the well has been constructed to generate electricity with the gas. The electricity will be used at City facilities and for local businesses at the Auburn's Technology Park.

**3.4.7 Engine Company #3**

Located on the City's west side, Engine Company #3 is approximately 500 feet from a City owned hydro plant along the Owasco River. The City is looking at utilizing the power generated at the hydro plant to offset the cost of electricity to run both the Engine Company and to assist the Bombardier site, a former manufacturing plant. The City's desire is to have this facility power the emergency command center and not have the command center dependent upon the NYSEG power grid. The estimated cost for this project is $750,000.

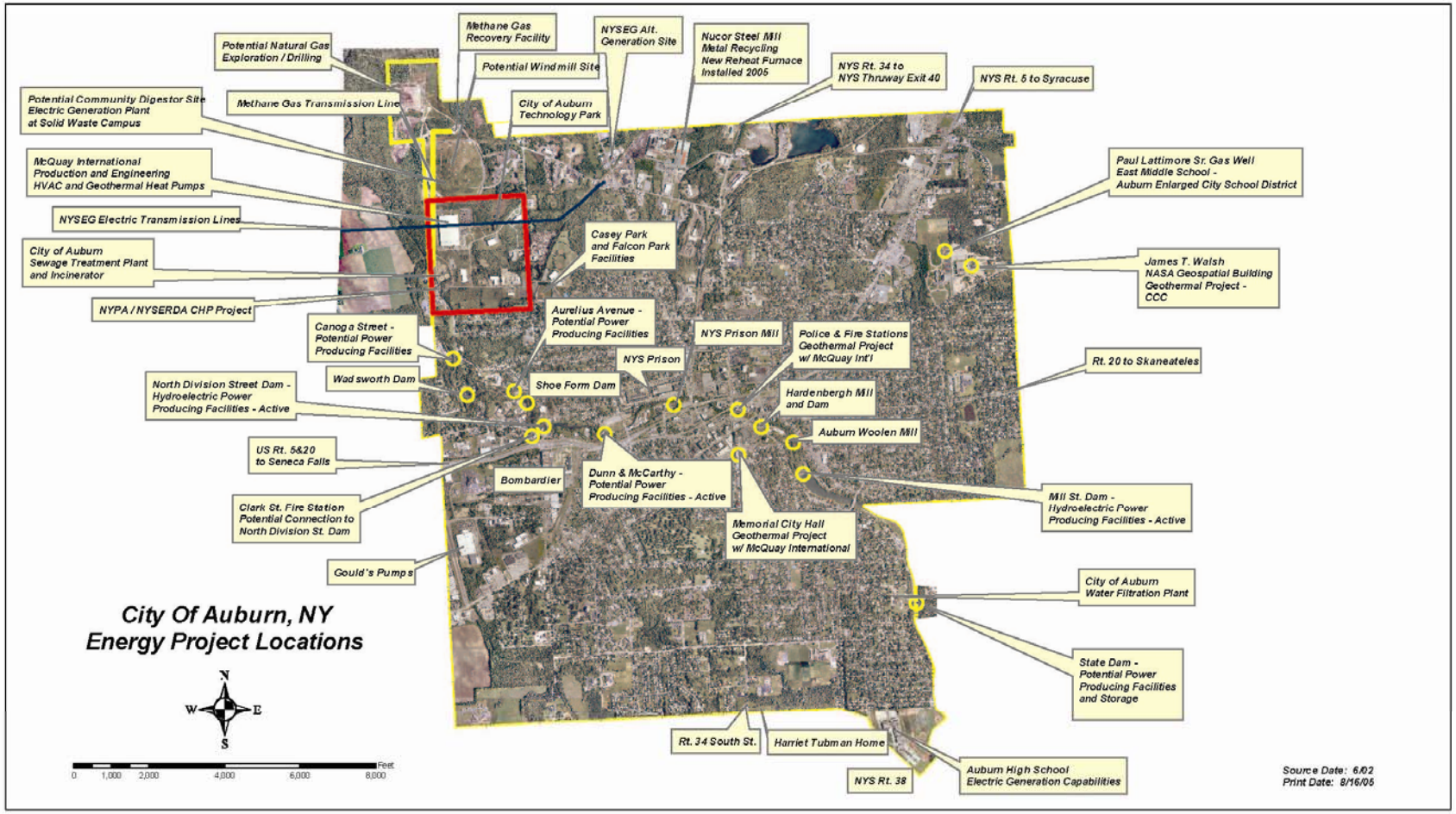
**3.4.8 Net Metering/Wheeling Charges**

The State of New York passed legislation that will enhance the opportunity for investing net metering for solar, wind, and aerobic digestion for all municipal installations, industry, and residences up to 2 MW. The City of Auburn plans to propose additional legislation to expand the qualified facilities to include hydroelectric power, electricity and gas transmission for municipalities. This would allow the City to use the hydroelectric power that it produces in its own facilities. If this is not accomplished, the City will negotiate with NYSEG on the existing hydroelectric dam agreements for what is called "wheeling charges". The existing Mill Street hydro facility is currently operating at the NYSEG avoided costs of under $.02 cents per kwh. We would like the Public Service Commission to encourage municipal governments to produce power and transmit and consume the power at their own facilities. The North Division Street hydroelectric dam is still providing significant revenue to the City (.0846c / KW). However, the City can produce additional power above the existing 600 KW limit for use. This additional power could be used at the Engine Company #3 or at the Bombardier Manufacturing site.

**3.4.9 Future New Energy Transfer Stations**

The Technology Park is ideally located to install electric and gas substations. The City hopes to expand the Auburn Public Power Agency's ability to provide low cost electricity and gas to the businesses. The initial cost for the substations is estimated at $1.8 million dollars. It will require the construction of approximately one-half mile of underground facilities, which allows the Power Agency to begin serving energy to customers at the Technology Park.

### 3.4.10 MAP OF PROJECTS



# Part 4: Estimated Energy Demand for the City of Auburn - Public Buildings and Facilities

## 4.1 Current Municipal Power Requirements

**Perspectives**

City of Auburn serves the residents' needs for public infrastructure with US Departments that are located in buildings and operate the city owned facilities. The goal of energy efficiency and self generation of power, to be a net zero community, requires the assessment of current demand for energy; and evaluating conservation measures to implement high efficiency green technologies to minimize the energy demand. While looking to lower energy use, City officials have been looking at various alternative energy options.

Cayuga County and City of Auburn Power service agencies have been working together to plan a long term strategy to provide cost effective power supply to the local residents. Studies completed by these agencies have reported total electrical energy demands "KWH per year" in Yr. 2003-2004 as follows:

| | City of Auburn | | Cayuga County | |
|---|---|---|---|---|
| | # Customers | KWH/yr | # Customers | KWH/yr. |
| Residential | 11,200 | 77 Million | 31,700 | 217 Million |
| Commercial | 1,700 | 126 Million | 2,900 | 215 Million |
| Industrial | 100 | 504 Million | 100 | 617 Million |
| Total Elec. Demand | | 707 Million | | 1,049 Million |

The energy audit studies conducted with funding assistance from the NYS Power Authority have identified the main City of Auburn public facility energy use and evaluated potential energy conservation measures to reduce demand and save on operating costs.

**The main public energy (natural gas and electricity) users and their energy demands (2005-2006) are listed below;**

| | Natural Gas Therms |
|---|---|
| 1. Cemetery ( Soule) | 2,531 |
| 2. Central Garage | 14,089 |
| 3. Fire Department E#2 | 3,980 |
| 4. Fire Department E#3 | 5,717 |
| 5. Osborne St. Pump | 1,876 |
| 6. Casey Park Rink | 23,865 |
| 7. Falcon Park | 7,730 |
| 8. Hoopes Park CLHS | 4,785 |
| 9. Pomeroy Park | 88 |
| 10. YMCA fields | 1,232 |
| 11. Franklin Street Garage | 4,968 |
| 12. Police Bldg Report Ctr. | 88 |
| 13. Police & Fire Station | 11,154 (x2) |
| 14. Sanitation- Division St. | 4,531(x2) |
| 15. Auburn Treatment plant | 2,395 |
| 16. Bradley St. | 735,804 |
| 17. Filter Plant | 3,001 |
| 18. Swift Street | 13,441 |
| 19. 30 Logan Street | 2,932 |
| Totals | 859,843 |

**Electrical energy demand of various facilities is summarized below**.

| | **Annual Average Electricity KWH/Yr.** |
|---|---|
| 1. Upper Pump Station | 855,900 |
| 2. Lower Pump Station | 165,000 |
| 3. Street Lighting | 2,168,880 |
| 4. Lighting Arterial | 373,800 |
| 5. Lighting Christmas | 43,000 |
| 6. Sewage Treatment | 1,806,000 |
| 7. Water Treatment | 396,160 |
| 8. City Hall | 105,000 |
| 9. Central Garage | 60,640 |
| 10. Police and Fire station | 211,800 |
| 11. Osborne St. Station | 211,800 |
| 12. Fredrick St. Station | 211,800 |
| 13. Clark St. Station | 211,800 |
| 14. Parking Garage | 313,080 |
| 15. Casey Park | 447,750 |
| 16. Falcon Park | 8,640 |
| 17. Clifford Park | 2,480 |
| 18. Misc. small sites (10%) | 740,000 |
| Total estimated annual average | 8,121,730 KWH / yr |

## 4.2 Goals for Conservation and Green Energy Generation:

Sustainable green designs seek 20% to 40% reduction in energy demand by applying new high efficiency lighting technology as compared to conventional technology. The City and County should continue to seek power authority assistance to undertake energy audits and expand the scope to include other sustainable green issues. The current cost of electricity in municipal buildings exceeds millions of dollars per year. A goal of 30% reduction in 5 years should be set to save $300,000 per year with a policy to designate the savings to create a "green revolving loan fund". Such a fund can be matched with government and private sources and act as local source for funding green retrofits by institutions to generate economic activity. Repayment of the loans would keep this source to be a permanent catalyst for green improvements and achieving the goal of energy reduction over the years and demonstrating the reduction in community carbon foot print.

The cogeneration power projects at the landfill based on biogas are examples of the green energy generation. Installation and reactivation of the hydro electric sites, several farm organic waste digesters and new wind mills near the Landfill site will further help in reducing our dependence on oil based energy and take the city toward becoming a net-zero community in 10- 20 years.

# Part 5 Community Education, Vision and Consensus Building- Report and Recommendations of the Sustainable Economic Development and Energy Efficiency Summit

## Summation of Focus Groups

A. Alternate Energy and Conservation

B. Transportation, Parks and Recreation and Open Spaces

C. Housing, Codes and Policies, Public Spaces

D. Solid Waste Management

E. Agriculture and Food Waste Management

F. Water and Storm water Management

G. Healthy Schools

H. Business and Economic Development

# Summation of Focus Group on
# Alternative Energy and Conservation

**Perspectives of Participants**

Many people in the community had different ideas and questions about alternative energy and conservation. Concepts included large municipal-scale sources of energy to small, everyday things that can be done at home. Most agree that the current alternative-energy projects are of highest priority and must be completed. These projects include the landfill and community digester project, hydro-electric sites on the outlet, and drilling a gas well at the landfill. Wider-range policy and infrastructure suggestions include developing and improving the ability of Cayuga County Power Authority to buy and sell renewable energy as well as coordinating Cayuga County's renewable energy projects with the city of Auburn.

Questions included the feasibility of lake-source cooling or geothermal for a home or neighborhood, the laws regarding the distribution of energy in an area, and support options for homeowners that want to go Green in New York.

**Recommendations for Individuals:**

1. Encourage local leaders by letting them know what's important to the voter.
2. Educate local leaders in areas of energy conservation.
3. Replace incandescent lights with compact fluorescent or LED.
4. Replace older thermostats with adjustable thermostats.
5. Avoid using energy at peak times.
6. Completely unplug appliances when they are off – they draw power when plugged in try plugging all appliances in an area into a surge protector, then unplugging the surge protector at night or before work to make it easier.

**Recommendations for Private Sector:**

1. Sponsor a light bulb program for school children to sell light bulbs to parents and educate peers about compact fluorescents. This could parallel efforts to sell wrapping paper, magazines, etc. to raise money for school.
2. Undertake an energy audit and identify a Workplace Sustainability Coordinator.
3. Create a recycling program with waste oil to produce biodiesel.

**Recommendations for Local and State Level:**

1. Complete auditing all municipal buildings in the county. This includes subsidized housing where the city or county pays the utility bill.
2. Complete planned and unfinished energy projects.
3. Support grassroots individuals and organizations that make an effort to go green.
4. Create an "Energy Star" tax holiday to encourage the purchase of energy efficient appliances.
5. Provide consistent rebates, incentives, and tax breaks for sustainable individuals. Programs that quickly expire discourage sustainable purchases.
6. Mandate Energy Conservation curriculum in schools from a young age to educate children and their parents on this issue.
7. Create an easily accessible website for individuals to find information on local policy, rebates, incentives, and available technologies in their community.
8. Investigate feasibility of wind power at Landfill site.

# Summation of Focus Group on
# Transportation, Parks and Recreation and Open Spaces,

**Perspectives of Participants**

In the policy areas of parks and recreation, open spaces, and transportation, ideas ranged from better utilizing public transportation to the simple act of enjoying nature for one's own pleasure. To accomplish the latter, Gary Duckett, Cayuga County's Park Maintenance Supervisor, suggested that Cayuga County staff visit the Sterling Nature Center to better understand the potential for renovating Emerson Park. Options include creating a Destination Playground and renovating the Park Pavilion. There was also a call for a "Green Parks" goal – which would eliminate the use of petroleum products at County Parks within five years.

Regarding transportation, while improvements for Centro bus have been suggested, increased awareness of the system's affordability, reliability, and stop at major workplaces is essential. The Tompkins County bus system (TCAT) could be used as a model of a bus system that effectively serves the city of Ithaca as well as the surrounding rural areas.

**Recommendations for Individuals:**

1. Take advantage of public transportation more. Centro bus has stops at every major employment district.
2. Keep parks clean by following the "Carry in, Carry out" rule.
3. Make fuel economy a top priority in all future automobile purchases.
4. Take advantage of walking trails from downtown to Emerson Park.
5. Bike to close destinations when weather permits.

**Recommendations for Private Sector:**

1. Create carpool programs at the workplace to help employees cut down on fuel costs.
2. Create bike storage areas at workplaces, and provide shower facilities if possible.

**Recommendations for Local and State Level:**

1. Keep Auburn an eye-appealing city to keep students and youth in the area.
2. Provide funding for Emerson Park to make necessary upgrades.
3. Create a program to recycle restaurant grease for use in biodiesel vehicles.
4. Create Gateways to the city.
5. Connect residential neighborhoods to community parks and retail centers.
6. Better control and management of street lights. Possibilities include dawn to dusk controllers that wait until it is really dark before coming on. Other possibilities include turning off some lights (every other one) at certain times of the night and/or eliminating some streetlights all together.

# Summation of Focus Group on
# Housing, Codes and Policies, Public Safety

**Perspectives of Participants**

The major concern expressed in the areas of housing, codes and policies, and public safety was education. Participants agreed that there are already policies in place that are not being taken advantage of because of lack of information and education. It was suggested that the Auburn Citizen run a series of articles that provides information and places to go for information regarding code, laws, and ideas for homeowners to become more energy efficient and environmentally friendly. The County website should host a webpage that includes information for residents who were interested in "greening" their homes.

On the issue of public safety, there were general concerns for safety and upkeep of shoulders and sidewalks that are used for biking, running, and walking.

**Recommendations for Individuals:**

1. Become educated on how to build and live sustainably. Websites such as http://www.greenlivingtips.com can help to educate you.
2. Recycle storm water using rain runoff barrels to water gardens.

**Recommendations for Private Sector:**

1. Educate developers on the potential energy and water savings of LEED certified apartment buildings. There may be a small additional up-front cost, but this cost is returned in energy savings.
2. Create more Senior Living communities like Bluefield Manor where seniors can downsize from a larger house.
3. The Auburn Citizen and Post Standard can play an integral role with a regular section on relevant housing codes that help homeowners save money and become more energy efficient and sustainable.

**Recommendations for Local and State Level:**

1. Establish community gardens. Vacant and condemned houses make good locations for these gardens which beautify, add value to a neighborhood and may even produce to neighborhood residents
2. Update housing codes to emphasize conservation, improved weatherization and heating systems.
3. Expedite the permit process for LEED-certified building. This will encourage builders to build more sustainably.
4. Establish a Welcome Wagon to inform new residents of Auburn about recycling, energy conservation, and local housing code policy.
5. Track City residents who lack recycling containers and provide a Recycling Hotline or a Website page to request containers.

# Summation of Focus Group on
# Solid Waste Management

**Perspectives of Participants**

Solid Waste Management provides an opportunity to better utilize and manage the City's and County's efforts in transporting and storing solid wastes and potentially hazardous materials. It was suggested by several individuals that efforts to educate the community and provide an easily accessible route to dispose of hazardous household waste was necessary. Having two annual events rather than one, that are widely publicized could greatly reduce the amount of hazardous materials that end up in landfills, storm sewers, and ultimately ground and drinking water. Further suggestions included increasing the cooperation of the city and county in transporting and storing waste, which would decrease costs. It was noted that education in recycling and composting needs to be improved and the ultimate goal of solid waste management should be to reduce the amount of waste produced per household, business and school.

**Recommendations for Individuals:**

1. Increase education about recycling and composting.

**Recommendations for Private Sector:**

1. Conduct waste stream audits and increase programs to reduce, reuse, recycle, and compost waste.
2. Identify an institutional "Sustainability Manager" or form a green advisory team.
3. Recycle used tires for pervious.

**Recommendations for Local and State Level:**

1. Create Household Hazardous Waste collection days. Be proactive and informative to the public by getting the word out to them.
2. Increase cooperation in transporting and storing waste. Two to four towns and villages can share collection points.
3. Investigate feasibility of switching collection trucks to alternative energy sources. B20 is available and hybrid garbage trucks on the way.
4. Increase waste coming to the local Auburn landfill, rather than transporting to outside the county. This lowers costs for the city, increases efficiency and reduces carbon emission.
5. Consider hiring inmates and disabled persons for labor needed for recycling programs. This provides a service to the community while providing work for those who want it.
6. Plant fast growing willows for landfill cover and leachate control.
7. Use vegetated cover for final site restoration.

# Summation of Focus Group on
# Agriculture and Food Waste Management

**Perspectives of Participants**

As was said at the Summit – "Everything that I learned seemed to go around in a circle and come back to a digester". The community digester was the project on everybody's mind in this policy area. The digester embodies the idea of green energy production while alleviating many of the issues involved with agricultural waste. There remain some unknowns about the project. The issues of transportation and collection of food waste present unique problems involving fuel and labor costs. While there is an interest in having restaurants, food processing facilities, and educational institutions incorporate their food waste in the digester, the feasibility of implementing this requires investigation and detailed planning.

**Recommendations for Individuals:**

1. Composting of food waste is best kept at home. Transporting recyclable waste cancels out much of the benefit of recycling it. Compost is better for soil and environment than commercial fertilizer.

**Recommendations for Private Sector:**

1. Farmers should be educated and encouraged to join the community digester program.
2. Any company or organization that produces large volumes of food and organic waste should be encouraged to get involved with the Community Digester. These sources include manufacturing, restaurants, schools, the college campus, and jail.
3. Institutional food waste recycling at campuses and correctional facilities.
4. Collect used cooking oil from restaurants for use as bio-diesel and when feasible compost food waste

**Recommendations for Local and State Level:**

1. Create new markets for local farmers to sell their products.
2. Complete the Community Digester project. Prepare a plan to expand the digester to accommodate growing interest after initial success.
3. Educate farmers on the background and ongoing progress of the project.
4. Create an advisory group of interested farmers, schools, and other organizations that can offer recommendations and ideas to the digester project managers.

# Summation of Focus Group on
# Water and Storm Water Management

**Perspectives of Participants**

A number of issues, projects and suggestions were discussed that could collectively have a large effect on the management and quality of water in Cayuga County. The P-Project, which is a regional multi-county effort to reduce the amount of Phosphorous in Owasco and Cayuga lakes, needs to be pursued further in Auburn and Cayuga County to help reduce algal blooms and other water quality issues associated with high levels of phosphorous. Several suggestions were made that aim to reduce the amount of runoff entering storm sewers. These suggestions included rain gardens and community gardens, which direct rain runoff to vegetation instead of sewers, permeable pavements, which allow rainwater to permeate directly into the ground, and general water conservation.

**Recommendations for Individuals:**

1. Reduce use of Phosphorous in fertilizers, detergents, and dock washes.
2. Create rain gardens that collect roof and driveway runoff. This reduces storm water runoff.

**Recommendations for Private Sector:**

1. Create a Lake Forum or festival to promote safe and environmentally-sound recreation and water use.
2. Create bio-retention facilities in parking areas. Consider permeable pavements for overflow parking areas.
3. As businesses expand and new businesses develop, encourage storm water/rainwater collection for fire storage and irrigation.

**Recommendations for Local and State Level:**

1. Continue participation in P-Project in order to protect watershed.
2. Increase treatment of wastewater to reduce Phosphorous discharge.
3. Flood proof Auburn's upper pump station to protect from flooding.
4. Upgrade old leaking infrastructure to reduce water loss during transport.
5. Mandate bio-retention and/or storm water treatment for all development and redevelopment.
6. Undertake more thorough watershed inspections.
7. Manage city and county owned land around Owasco Flats to improve water quality.
8. Consider green roofs for large municipal buildings. They save energy and recycle storm water.
9. Provide education to encourage installation of no-flush toilets.
10. Increase awareness of cost and benefits of green roofs.
11. Increase awareness of use of natural wetlands and artificial wetlands for storm water management.

# Summation of Focus Group on Healthy Schools

**Perspectives of Participants**

There is a history of synergy and innovation between Public Education and alternative energy projects in Cayuga County and there can continue to be innovative approaches to designing and operating healthy schools. The Healthy Schools Network Inc. suggests creating a healthy and high performance school using a holistic approach to preserve the health and comfort of children and school employees, as well as to conserve resources. Schools are often not well maintained; asthma is a leading occupational disease of teachers and custodians and the leading cause of student absenteeism. The network notes that together, healthy and green designed facilities promote indoor air and environmental quality, thermal, visual, and acoustical comfort, and energy, water, and material conservation. Substantial evidence exists which documents the positive relationship between healthy schools and improved academic test scores as well as reduced operating costs.

Two school design and operational frameworks exist for developing Healthy schools. The US Green Building Council LEED for Schools (v2) is recommended for its guidelines on the setting of schools to ensure healthful sites and walk able communities. The newly constructed Cayuga County BOCES is designed to LEED Standards.

More recently the Collaborative for High Performance Schools (CHIPS) and Healthy Schools Network Inc. are being promoted by the New York State Department of Education and the New York Energy and Research Development Authority. The CHIPS comprehensive design criteria for school environments has been adopted for use in California, Massachusetts, and New Hampshire. CHIPS, which has become known as LEED Plus, offers licensees a comprehensive design protocol and an Operations and Maintenance Manual. See www.chips.net

An additional resource brought to attention at the Summit: "Greening America's Schools" is a collection of 30 case studies about schools that were built or retro-fitted to be LEED certified. The case studies may serve as a guide for greening schools in the city, town, and villages. Larry Garrucio, Superintendent of Buildings and Grounds of the Auburn Enlarged City School District, suggested that the school district explore geothermal heating and cooling and natural gas wells to further offset their energy costs.

**Recommendations for Individuals:**

1. Build awareness of the benefits of Healthy Schools among Parent Teacher Associations, teacher unions, and students.

**Recommendations for Schools:**

1. Develop curriculum on Sustainability and Green Schools.
2. Involve students and faculty in the design and management of school waste reduction, reuse, and recycling programs.
3. Explore geo-thermal heating and cooling, natural gas wells, wind and solar to further offset energy costs.
4. Utilize bio-diesel for the operation of school buses and set minimum times for leaving school buses idle at pickup.
5. Install a small scale wind turbine at Auburn High School.

**Recommendations for Local and State Level:**

1. Develop a NYSERDA grant program to assist schools in the design and implementation of water conservation programs.

# Summation of Focus Group on Business and Economic Developments

**Perspectives of Participants**

This discussion centered on developing cooperation between businesses, developers, government, unions, educational institutions, and environmental and community organizations, which are all involved. The best way to achieve the highest potential is by drawing on the strengths of different parties in a collaborative effort. In order to do this, the City Planning Department suggested supporting development of entrepreneurs and existing businesses involved with green technology, by connecting them with research institutions (such as Cornell) and other technical experts to evaluate the feasibility of new technologies in their areas of business. Another suggestion aimed at increasing efficiency and communication is to avoid overlapping of resources, such as IBEW Solar Training, BOCES Solar Training, and efforts of Cayuga Community College. If key economic development stakeholders can be brought together, it may be possible to form a Green Collar Job Corp to prepare students and displaced workers for the thousands of emerging green technology employment needs in the areas of research, design, manufacturing, construction, installation, retrofitting, and maintenance. These trained green collar employees are essential to recruiting green industries to the area.

The second primary area of discussion revolved around an emerging movement to encourage restaurants to go green and generate 'green' in the process. Restaurants are the retail sectors' largest consumers of energy. Restaurants also use more energy per square foot than any other type of commercial building. Participants felt that Auburn should create a model of private-public sector cooperation for the National Restaurant Association's recent green restaurant initiative.

**Recommendations for Individuals:**

1. Support businesses that buy and sell local products such as produce.
2. Request paper bags at the point of purchase.

**Recommendations for Private Sector:**

1. Incorporate LEED Building standards during renovation and new construction.
2. Undertake analysis of a hybrid of renewable energy technologies prior to renovation or new construction.
3. Work with the Cayuga County Chamber of Commerce, the regional tourist agency, and other potential partners to establish a green restaurants task force.

**Recommendations for Local and State Level:**

1. Convene a meeting of key stakeholders from business, labor, schools, government, environmental, and community organizations to share information on the necessary infrastructure, training, and funding for Green Collar employment opportunities.
2. Create financial and building code incentives to encourage development consistent with LEED design and construction.
3. Establish a Low Interest, Municipal and State Revolving Loan Funds to support Healthy High Performance LEED Standard Buildings modeled after the Environmental Facilities Corporation Wastewater Treatment revolving loan fund.

# Part 6 Task Force Capacity Building and Implementation Goals Schedule

A. Alternate Energy and Conservation

B. Transportation, Parks and Recreation and Open Spaces

C. Housing, Codes and Policies, Public Spaces

D. Solid Waste Management

E. Agriculture and Food Waste Management

F. Water and Storm Water Management

G. Healthy Schools

H. Business and Economic Development

## A. Alternative Energy and Conservation

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| A.1 | Complete Audit of City Garage, County--- | **H** | **1 year** | **City and County Power Authorities** | **NY Power Authority** |
| A.2 | Implement Audit Recommendations | **H** | **1-3 years** | **City and County Power Authorities** | **NY Power Authority, City, County, NYSERDA** |
| A.3 | Complete City WWTP Bio-digester Facility | **H** | **1-2 years** | **Auburn Municipal Power Agency** | **NYSERDA, Auburn Municipal Power Agency, Federal Government.** |
| A.4 | Complete Community Digester Project | **H** | **1-2 years** | **County Soil & Water** | **NYSERDA, USDA, County, Private Farms** |
| A.5 | Complete Centralized Dairy Farm Composting Project | **H** | **1-3 years** | **Cayuga Power Authority, Cayuga Market Group, Cayuga Regional Energy Inc.** | **USDA, NYSERDA, Farmers, IDA** |
| A.6 | Initiate and Implement City Hydro Project | **H** | **2-5 years** | **Auburn Municipal Power Agency & Private Sector** | **Auburn Municipal Power Agency, Private Company** |
| A.7 | Educate individuals and businesses to conserve power with LED lights, motion sensors, demand side energy audit, weatherization | **H** | **Ongoing** | **City of Auburn & Cayuga County Sustainable Steering Committee (CCSSC) & Cornell Cooperative Ext.** | **NYSEG, NYSERDA, Cornell Cooperative Ext. Federal Government** |
| A.8 | Produce Energy Conservation Kits and Tool Box, such as sample CFL and LTD light bulbs, caulking for windows, water saver shower headsets. | **H** | **1-2 years Ongoing** | **City of Auburn, CCSSC, BOCES** | **Stardust Foundation, NYSERDA, Federal Block Grants** |
| A.9 | Create an "Energy Star" tax holiday to encourage the purchase of energy efficient appliances | **H** | **1-2 years Ongoing** | **City of Auburn, Cayuga County** | **City of Auburn, Cayuga County** |
| A.10 | Provide consistent rebates, incentives, Local, State and Federal Aid for sustainable homes, businesses, schools, etc. | **H** | **Ongoing** | **CCSSC, City, County** | **NYSERDA, Federal Grants & Loans, USDA, Cayuga County, City of Auburn, Towns &** |

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| A.11 | Establish low interest, self-sustaining revolving loan fund for businesses to undertake sustainability studies retrofit and new construction following Leed guidelines | **H** | **Start up in 1 year & Ongoing** | **Auburn Municipal Power Agency & CCPUSA** | **NYSERDA, Stardust Foundation, City, County Bond** |
| A.12 | Create an accessible user-friendly website for individuals to identify information on Local, State, Federal and private sector sustainable policies, rebates, incentives, technologies in their community. Include interaction, encouraging citizens to offer suggestions to government. | **H** | **1 year & Ongoing** | **Cayuga County Chamber of Commerce & Cayuga County BOCES** | **BOCES, NYSERDA, Chamber of Commerce** |
| A.13 | Encourage Energy and Conservation curriculum in schools from grades K-12 | **M** | **Ongoing** | **City, Town School Districts** | **City, Town School Districts** |

**B. Transportation, Parks and Recreation and Open Spaces**

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| B.1 | Develop a marketing campaign to increase Centro Bus System rider-ship. Aim for citizens to use the bus one or twice a week. | **H** | **Ongoing** | **Centro, USDOE Clean Cities** | **Centro** |
| B.2 | Encourage businesses to create carpooling programs at the workplace, establish special corporate incentive programs to encourage purchase of alternative vehicles. | **H** | **Ongoing** | **Centro, Cayuga County Chamber of Commerce, businesses** | **Centro, Cayuga County Chamber of Commerce, businesses** |
| B.3 | Enhance municipal use of alternative fuel vehicles | **H** | **1-3 years** | **City of Auburn, Cayuga County, Towns & Villages** | **USDOE Clean Cities, NYSERDA, City of Auburn, Cayuga County, Towns & Villages** |
| B.4 | Create Green Gateways to the City with signage such as "Welcome to Auburn, USA'S Green City" | **M** | **1-3 years** | **Auburn Beautification Commission** | **Auburn Beautification Commission, City of Auburn, Cayuga County Chamber of Commerce** |
| B.5 | Provide funding for improvements to Emerson Park: LED lighting, renovation of pavilion with solar lighting | **H** | **1-3 years** | **County Parks** | **Cayuga County, NYSERDA** |
| B.6 | Develop Destination Playground at Emerson Park | **M** | **3-5 years** | **County Parks** | **Cayuga County** |
| B.7 | Develop Nature Center at Emerson Park | **M** | **3-5 years** | **County Parks** | **Cayuga County** |
| B.8 | Replace traffic signals with LED lights | **H** | **1-3 years** | **City of Auburn** | **NYSERDA, ESCO's** |
| B.9 | Develop connecting trails linking neighborhood to neighborhood, neighborhoods to parks, stores, school, etc. | **M** | **3-5 years** | **City & County Planning, Auburn Beautification Commission** | **City, County, Federal Programs** |
| B.10 | Create a program to recycle restaurant grease for use in Bio-diesel vehicles | **H** | **1-3 years** | **Cayuga Onondaga County BOCES, Private sector** | **Cayuga Onondaga County BOCES, Private sector** |

**C. Housing, Codes and Policies, Public Safety**

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| C.1 | Update housing codes to emphasize conservation and weatherization. County Planning identify model codes for city, towns and villages. | **H** | **1-3 years** | **County, City, Towns, Villages, Homeowners** | **HEAP, NYSERDA, Utility Companies, DOE** |
| C.2 | Create financial incentives for energy audits, weatherization, conservation and installation of renewable energy, such as County low interest, self-sustaining, revolving loan funds. | **H** | **Ongoing** | **County IDA, City, Towns, Villages, Home site, development corporations, Cayuga-Seneca County Community Action Agency** | **Government Bonds, NYSERDA, HUD, HEAP, Escrows, Work Fuel Development Institute, Trade Utilities.** |
| C.3 | Expedite the approval and/or permit process for sustainable development, redevelopment or improvement s. | **H** | **1-2 years** | **City, Towns, Villages, County IDA** | **Private Sector** |
| C.4 | Encourage development of a LEED certified apartment building | **M** | **3-5 years** | **Local Governments** | **Private Sector, HUD, IDA** |
| C.5 | Create more Senior Living Communities such as Bluefield Manor to enable seniors to downsize from large homes. | **M** | **1-10 years** | **Private Sector** | **HUD, IDA** |
| C.6 | Encourage walking and biking. Insure sidewalks and shoulders are in safe condition. | **H** | **Ongoing** | **Local Government** | **Local Government** |
| C.7 | Insure all City residents have recycling containers. | **H** | **Ongoing** | **City of Auburn** | **City of Auburn** |
| C.8 | Establish City/County recycling website with information on reduction, reuse and recycling including location of recycling drop of centers. | **M** | **1-3 years** | **City of Auburn, Cayuga County** | **City of Auburn, Cayuga County** |
| C.9 | Establish community gardens on vacant lots. | **L** | **3 years & Ongoing** | **City of Auburn** | **Private Sector, Landscapers** |

## D. Solid Waste Management

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| D.1 | Update the Cayuga County, City of auburn Solid Waste Management Plan | **H** | **1-3 years** | **Cayuga County Planning, City of Auburn Solid Waste Management** | **NY State, County, City** |
| D.2 | Increase volume of waste tipped at City of Auburn landfill. Increase Cayuga County, Town and Village waste use of the City of Auburn landfill. Strengthen City of Auburn relations with private waste companies; educate on tipping fee economics and scale at the landfill and obtain hauler feedback and encourage cooperation among private waste companies. | **H** | **Ongoing** | **City of Auburn Solid Waste, County Planning** | **City of Auburn, Cayuga County Planning** |
| D.3 | Increase and track participation in curbside and drop-off recycling programs. Invest in public education on the value of waste reduction, reuse and recycling. | **H** | **Ongoing** | **City of Auburn Solid Waste, Cornell Cooperative Extension, Cayuga County Planning** | **City of Auburn, Cayuga County** |
| D.4 | Establish waste reduction, reuse and recycling programs in all City and County office buildings and facilities. | **H** | **1-2 years** | **City of Auburn and Cayuga County Sustainable Steering Committees, CCCSSC, City of Auburn Solid Waste, Cayuga County Planning** | **City of Auburn, Cayuga County, State** |
| D.5 | Encourage corporate/business waste reduction, reuse and recycling programs. Identify office paper recycling company. | **H** | **1-2 years** | **Cornell Cooperative Extension** | **Cayuga County** |
| D.6 | Enhance household hazardous waste collection days. Continue proactive public information initiatives including use of WEB site | **M** | **Ongoing** | **Cayuga County Planning, Cornell Cooperative Extension, City of Auburn** | **Cayuga County** |
| D.7 | Investigate feasibility of switching collection trucks to alternative green fuels. Encourage inter-municipal purchasing agreement for B20 and other fuels. | **M** | **1-4 years** | **County Public Works, City of Auburn Public Works, Cayuga County BOCES** | **Cayuga County, City of auburn, USDOE, Clean Cities, NYSERDA** |

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| D.8 | Recommend Auburn undertake research, and prepare recommendations on the feasibility of "Volume Based" pricing on the city, towns, and villages. | **M** | **1-3 years** | **CCSSC, City of Auburn Solid Waste, Cayuga County Planning, Private Consultant, College Intern.** | **City of Auburn, Cayuga County, Cayuga Community College Research Project.** |
| D.9 | Establish Contraction and Demolition Debris Recycling Program, including program for reuse of construction materials. | **M** | **1-5 years** | **CCSSC, City of Auburn solid Waste, County Planning, Private Consultant.** | **Private Sector** |
| D.10 | Develop or identify tire reuse and recycling program, reusing tires for pervious paths and trails | **M** | **1-4 years** | **Cayuga County Planning, CCSSC** | **Private Sector** |
| D.11 | Investigate the potential for hiring disabled persons and inmates for recycling programs. | **L** | **3-5 years** | **Cayuga County Cornell Cooperative Extension, CCSSC** | **To be determined** |

**E. Agriculture and Food Waste Management**

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| E.1 | Completion of the City of Auburn Bio-digester utilizing waste----- sludge to produce methane | **H** | **1-2 years** | **City of Auburn** | **Federal Aid, NYSERDA, City of Auburn** |
| E.2 | Completion of the Dairy Farm Waste Community Digester on County House Road | **H** | **1-2 years** | **Cayuga County Soil & Water, GBU Engineers, Sterns-Wheeler** | **NYSERDA, Rural Development, NY State Ag & Markets** |
| E.3 | Completion of the Regional Cayuga County Public Utility Service Agency (CCPUSA) Bio-digester | **H** | **1-5 years** | **CCPUSA, Cayuga Renewable Energy Inc., Private Sector** | **USDA, NYSERDA, NYSEG, Empire State Dev., Dairy Farmers, Food & Restaurant Industry** |
| E.4 | Encourage the creation of a private sector entity to collect food, organize waste and cooking oil to be used as feedstock for the CCPUSA Regional digester. | **M** | **2-4 years** | **Private Sector** | **Auburn IDA, Empire State Development, NYSERDA, Private Investors** |
| E.5 | Encourage homeowners to compost yard and food waste for home gardens. | **L** | **Ongoing** | **Cayuga County Solid Waste and Planning Departments, Cornell Cooperative Extension, Homeowners** | **NYSERDA, Individual Homeowners** |
| E.6 | Create a map of farm markets website and hard copies to encourage the use of existing farmers' markets and enhance the creation of new roadside farm markets. | **L** | **Ongoing** | **County Planning, Cornell Cooperative Extension, County Tourism** | **Cayuga County, Cornell Cooperative Extension, Cayuga County Chamber of Commerce, Cayuga County Tourism** |
| E.7 | Create a program for restaurants and food facilities to recycle cooking oil for biodiesel | **L** | **3-5 years** | **Private** | **NYSERDA** |

**F. Water and Storm Water Management**

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| F.1 | Continue participation in the Regional Phosphorous Reduction Program: P-Project. Promote phosphorous alternatives in fertilizers, detergents and dock soaps. Countywide ban on phosphorous in dishwashing detergent, house wash, dock wash and fertilizers. | **H** | **Ongoing** | **Cayuga County Water Quality Management Agency** | **Flow-Grow and Cayuga County Water Quality Management Agency** |
| F.2 | Encourage business to adopt Leadership in Energy and Environmental Management (LEEM), storm water management and site development practices, such as bio-retention facilities in parking lots and permeable pavements. For public projects, include sustainable storm water management practices in bid requirements. | **H** | **Ongoing** | **County, City, Towns and Villages.** | **Business and Developers** |
| F.3 | Encourage citizens to conserve water through measures such as rain gardens to mitigate storm water from driveways and roads. | **H** | **Ongoing** | **County, City, Towns, Villages, CCSSC, Sierra Clubs, Schools** | **Cayuga County, Sierra Club** |
| F.4 | Utilize the availability of existing water and waste water treatment plant capacity to promote sustainable economic development. | **H** | **Ongoing** | **City of Auburn and Cayuga County Economic Development, NY Empire State Development Corporation** | **Cayuga County Chamber of Commerce, NY Empire State Development Corporation** |
| F.5 | Upgrade waste water and waste treatment plants utilizing state of the art management practices. | **M** | **Ongoing** | **City, Towns and Villages** | **NY State Environmental Facilities Revolving Loan Fund, NYSERDA, User Fees** |

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| F.6 | Implement effective strategies to reduce water loss during transport. | **M** | **1-5 years** | **City, Towns, Villages** | **NY State Member Items** |
| F.7 | Create an Owasco Lake Public Forum or Festival to promote safe and environmentally sound recreation and water use. | **M** | **Ongoing** | **Owasco Watershed Lake Association** | **Owasco Watershed Lake Association** |
| F.8 | Establish a Drainage District Manager with responsibility for infrastructure, southwest area ponds, water level oversight. | **M** | **1-3 years** | **Cayuga County Water Quality Management Agency** | **Cayuga County Water Quality Management Agency** |
| F.9 | Recruit a local distributor for permeable paving products. | **M** | **2-5 years** | **County and City Economic Development Agencies** | **IDA, private sector** |
| F.10 | Investigate the feasibility of developing secondary water sources from Cayuga Lake and Lake Ontario | **L** | **3-10 years** | **Cayuga County Water Quality Management Agency, City, Towns and Villages** | **Cayuga County Water and Sewer Authority** |

## G. Healthy Schools

| | Recommended Action<br>Greater Auburn School District | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| G.1 | Build awareness of the benefits of Healthy Schools among PTA, teacher unions, and students | **H** | **Ongoing** | **School Green Team** | **Volunteer** |
| G.2 | Develop curriculum on Sustainability and Green Schools | **H** | **1-2 years** | **School Green Team/Science Dept.** | **Volunteer** |
| G.3 | Involve students and faculty in the design and management of school waste reduction and recycling | **H** | **Ongoing** | **School Green Team** | **Volunteer** |
| G.4 | Undertake cost-benefit analysis of geo-thermo heating and cooling and natural gas wells at school campuses | **M** | **1-3 years** | **Private Consultants** | **NYSERDA, School District** |
| G.5 | Utilize bio-diesel for the operation of school buses. Limit idling time of buses. | **M** | **Ongoing** | **School District, BOCES** | **Private and Auburn BOCES** |
| G.6 | Develop a NYSERDA grant program to assist schools in the implementation of sustainability programs such as water conservation. | **M** | **1-3 years** | **School facility manager, Green Team** | **NYSERDA** |
| G.7 | Explore the feasibility of a wind turbine at Auburn High School | **M** | **1-5 years** | **Auburn School District** | **NYSERDA, Private-shared cost savings** |
| | | | | | |
| | **Recommended Action<br>Cayuga-Onondaga County BOCES** | **Priority** | **Time Frame** | **Responsible Official, Board, Agency** | **Potential Funding Source** |
| G.8 | Purchase two alternate fuel vehicles | **H** | **1-2 years** | **BOCES** | **NYSERDA, BOCES** |
| G.9 | Install natural gas fueling stations at the BOCES Campus. | **H** | **1-2 years** | **BOCES** | **US Department of Energy Clean Cities and BOCES** |

## H. Business and Economic Development

| | Recommended Action | Priority | Time Frame | Responsible Official, Board, Agency | Potential Funding Source |
|---|---|---|---|---|---|
| H.1 | Organize a Roundtable discussion on pathways to Green collage jobs involving key stakeholders such as green related area businesses, unions and academic institutions | **H** | **1 year** | **CCSSC, City of Auburn and Cayuga County Economic Development** | **Local Labor Unions, Cayuga County Community College** |
| H.2 | Encourage businesses to buy and sell local products such as produce | **H** | **Ongoing** | **CCSSC, Agriculture Industry Trade Associations** | **Agriculture Trade Associations, Auburn Chamber of Commerce, NY State Agriculture and markets.** |
| H.3 | Establish a Municipal Low Interest Revolving Loan Fund to support private investment and LEED standard buildings | **H** | **1-3 years** | **City of Auburn Economic Development, Cayuga County Economic Development** | **Cayuga County IDA Stardust Foundation** |
| H.4 | Create financial and building code incentives to encourage LEED design | **M** | **1-2 years** | **City of Auburn, Towns and Villages** | **City of Auburn, Cayuga County** |
| H.5 | Create a 'Green Restaurants Task Force' | **M** | **1-2 years** | **CCSSC, Cayuga County Chamber of Commerce** | **National Restaurant Association, Food & Beverage Industry.** |
| H.6 | Encourage analysis of renewable energy technologies prior to renovation or new construction projects | **M** | **Ongoing** | **City of Auburn, Towns and Villages** | **Private Developers** |
| H.7 | Encourage Green retrofits of core downtown buildings to attract new business and tenants | **L** | **5-10 years** | **Cayuga County Chamber of Commerce** | **Cayuga County IDA, Municipal Revolving Loan Fund** |

# Part 7 The Challenges: Opportunities and Constraints to Reliable Energy Resources and Sustainable Economic Development.

Undertaking preparation of the City of Auburn and Cayuga County Comprehensive Sustainable Energy and Development Plan, required adherence to a critical decision making path, consisting of: 1) Formation of the stakeholders committee, 2) Agreement on plan goals and key traits of sustainable communities, 3) Research and data gathering, and 4) Community education, vision and consensus building.

The critical decision making path process has resulted in the identification of 76 recommended actions, covering eight sustainability topic areas: A) Alternative Energy and Conservation, B) Transportation, Parks and Recreation and Open Spaces, C) Housing, Codes, and Policies, Public Spaces, D) Solid Waste Management, E) Agriculture and Food Waste Management, F) Water and Storm Water Management, G) Healthy Schools and H) Business and Economic Development. As presented in Part 6, each of the eight task forces met after the summit, reviewed recommendations and prioritized the actions.

The City of Auburn and Cayuga County, in consultation with Larsen Engineers, have undertaken a synthesis and analysis of the results of each step in the critical decision making path and the 76 recommendations, with a special emphasis on the 43 high priority actions for Task Force capacity building. The analysis of these recommendations identified 20 high priority recommendations which either cut across one or more of the eight sustainability topic areas, or are critical actions necessary to maintain and accelerate the community's status as a national leader in small city sustainable planning and development.

The following 20 recommendations and corresponding opportunities and constraints should be considered when developing principals, policies and programs, to carry out these recommendations. The medium and lower priority recommendations should be considered as priorities for the long term.

1. **Complete the City of Auburn Wastewater Treatment Plant Bio-Energy Facility**

   **Opportunities:**

   The 11.6 million dollar project, to convert Auburn Wastewater Treatment Plant Sludge to methane gas power, has received federal, state and local funding in excess of two million dollars. A private partner is building, and will own and operate the Facility. The commissioning of the Bio-Energy facility is under way and will avoid $800,000 in natural gas charges once completed. The facility offers the opportunity to serve as a tool for economic growth by selling low-cost electricity to new industries at the nearby Technology Park. The facility will have the capability to anaerobically digest sludge from other communities.

   **Constraints:**

   The Auburn Municipal Power Agency needs to identify markets for the sale of excess power, before the facility can capture its full energy, economic and environmental benefits.

2. **Complete the County Soils and Water Community Digester Project.**

   **Opportunities:**

   The farm waste digester, located on County House Road, has been spearheaded by the Cayuga County Soils and Water Conservation District. The manure and food waste digester facility has received a New York State Part 360 Permit to design and construct the community digester. The 160 ton per day manure and organic waste digester will produce 0.6 MW of electric power. Utilizing a hydraulic technology, developed by the German Engineering Company GBU, three tank digester system will convert farm manure, potato waste and grease fat into power and a nutrient soil additive. Agreements are in place for the low cost power to be sold to Cayuga County to offset the use of expensive brown power at the County Public Works building and the County Jail and Nursing Home. County Soil and Water has also put into place a 10 year agreement with large

area dairy farmers to take back the liquid product and use as an organic crop spread.

**Constraints:**
While the digester is currently under construction, the project has encountered a number of financial, technical and legal obstacles, which have slowed the startup of the digester. The exhaustive NYSDEC state permitting process extended the project timeline over two years during which the cost of steel, concrete, and equipment grew, resulting in a new 4.2 to 4.5 million dollar budget from the original 3.2 million, which the county had secured. The increased budget and changes in the tank mixing equipment and generator specifications, recommended by the German and local engineers, resulted in the need to rewrite and re-issue bids to comply with state laws. A major obstacle was the difficulty that the county and engineers experienced in finding a tank manufacturer with the capacity to provide a steel tank with appropriate exterior insulation and to provide the necessary insurance on the tanks. The county has noted both time and money could have been saved, had there been in place, a federal or state agency or mechanism to simply underwrite the insurance on projects with proven foreign track records that are being developed for the first time in the United States.

Currently the County is seeking additional federal and state aid to cover the project's increased costs and hopes to complete the community digester in late 2009.

3. **Complete the Cayuga County Public Utility Service Agency Centralized Bio-Digester Project – CCPUSA**
**Opportunity**:
This challenging Cayuga County Public Utility Service Agency (CCPUSA) 60 million dollar project has the potential to serve as a national and international model for the centralized, regional collection, processing and transportation of organic waste. The project is being driven by the rugged individualism of a group of large dairy farmers, with some federal and state financial support. Currently, the project is coordinated by Cayuga Renewable Energy Inc., a for profit company, owned by Spruce Haven and O'Hare Farms – Oakwood Dairy.

In essence, the Centralized Bio-Digester Facility, utilizing proven technology, would involve the cooperative efforts of 14 county dairy farms and 10 on-site digesters. The project provides the opportunity to sustainability reuse the waste from 20,000 to 25,000 cows each year, while producing and selling 1.5 million deca-therms of energy annually. Participating farms would connect into new laterals encompassing over 20 miles of piping. A new 12 inch line would transport the digested bio-gas approximately 20 miles south to north to the Cayuga County Industrial Development Agency's Aurelius Business Park on Routes 5 and 20. The Cayuga County Public Utility Service Agency, CCPUSA ,will be responsible for managing the sale and distribution of the low cost green public power to industrial, commercial and large residential consumers.

**Constraints:**
The successful implementation of the Cayuga County Centralized Bio-gas Project will require coordinating the completion and/or initiation of three critical inter-related A, B, C's necessary to make the project viable for development.

A. **Coordinated Technology, Market Research and Agricultural Waste Supply Agreements**.
Further technology and market research is required to prepare an updated economic pro forma of costs and revenues. Upon the project's inception, in 2006, NYSERDA awarded Cayuga Renewable Energy Inc. a one million dollar grant. However, the NYSERDA grant was withdrawn, due to a lack of formal commitments among participating farmers and their inclination to move forward with their individual digester projects, rather than work in a collective and coordinated fashion. The research and cooperation gap has been partially resolved by in-kind research from Cornell University and the collaboration which has grown among farmers participating in the Cayuga Marketing Group.

**B. Long Term Purchase Agreements**.

The private sectors lending underwriting standards have required that Cayuga Renewable Energy identify a private utility or company willing to enter into a 10 year agreement to purchase and use or market the bio-gas. Considering the conditions in the energy marketplace, a 10 year commitment is generally not consistent with the long term risk investment standards of utilities or large industrial consumers. Further, the utilities demanded exclusive agreements with the CCPUSA. Discussions with NYSEG and Owens-Corning have broken off partially due to these standards.

**C. Insurance**.

The underwriting standards of financial institutions and utilities require insurance to back up the bio-gas supply guarantees of the Cayuga Renewable Energy Inc. It has been suggested that a CCPUSA bond, as the required insurance, would also give the public power agency a stronger foundation, or as one stakeholder noted, needed legs, to effectively function. A second option, as mentioned above in relation to the County Community Bio-digester, is for the federal or state government to establish a program or process for underwriting the insurance for these 21st Century Demonstration Projects.

**4. <u>Initiate the City of Auburn Hydro Power Project</u>**.

**Opportunities:**

The historical manufacturing base in the City of Auburn was originally established through self reliance on one of the region's most sustainable, natural resources – water. These abundant, local water sources include the Owasco River, which runs from the southeast to northwest city center; Owasco Lake and Cayuga Lake. The city, in partnership with the private sector, is renewing interest in utilizing this key resource as a key economic development tool.

The New York Power Authority is evaluating new mini hydro, low flow-low head at current city hydroelectric sites. Mini – hydro offers the ability for on-site generation and use of water power. NYPA also sites the opportunity to provide hydro power to the city water treatment plant. This will require the construction of a new state dam at an estimated cost of 1.5 million, with a 13 year payback, without any federal grants.

Additionally, the city possesses the infrastructure to process additional water and waste water. The City of Auburn Water Treatment Plant has a design capacity of 13 MGD, but treats only an average of 6.5 MGD. The 12MGD Wastewater Treatment Plant has a surplus capacity of approximately three million gallons per day.

**Constraints**:

The environmental impact of any new dams for hydro power must be investigated with a mitigation plan. Mini-hydro presents the opportunity for limited environmental impact and lower construction costs. However, this will require obtaining funding for a feasibility study of the entire Owasco River. Federal regulations must be studied to determine standards for on site generation of low-flow hydro power.

**5. <u>Create a Municipal, Low Interest, Self Sustaining, Green Revolving Loan Fund to Assist in Financing LEED Certified Projects, Demand Side Energy Management, Weatherization and Installation of Renewable Energy</u>.**

**Opportunities:**

The creation of a Green Revolving Loan will encourage and engage the private sector in plethora of renewable energy, energy conservation and sustainable design and construction practices. At a low interest rate of 1 to 2 percent, with payback terms of 3 to 5 years, a Green Fund will not only pay for itself, but also generate ongoing fund growth.

The New York State Environmental Facilities Corporation Revolving Loan Fund serves as a model for the creation of a fund.

The county or city may use its bonding ability, the Auburn Municipal Power Agency, the Industrial Development Agency, pension funds or grants from foundations to kick off the fund. Eventually the City and County may reinvest the cost savings resulting from their own energy conservation and renewable efforts into the fund.

**Constraints:**
The city and county must authorize its bonding attorneys to identify the statutory requirements for a fund, determine the economic impact of the fund and balance the creation of a green revolving loan fund ,with other upcoming bonded capital projects.

6. **Educate and Encourage Individuals and Business to Conserve Energy**

**Opportunities:**
Local media has taken a strong and growing interest in providing regular, ongoing, citizen education on the benefits of energy, conservation and simple practices. Non- profit agencies such as Cornell Cooperative Extension of Cayuga County and the Cayuga-Seneca Community Action Agency have assumed leadership roles and assigned staff to ongoing energy conservation programs.
Building trade unions are demonstrating increasing interest in forming partnerships with state and local community organizations to undertake conservation and weatherization programs. The City of Buffalo Apollo Alliance Project serves as a noteworthy new model of such partnerships.

**Constraints:**
Funding additional municipal staff and media campaigns for energy conservation programs poses a challenge in the face of shrinking municipal resources. New citizen volunteers are needed to coordinate efforts with businesses, schools and government and community organizations.

The county and city need to identify resources to create and manage a joint interactive, sustainability Web Site

7. **Develop a Marketing Campaign to Increase Centro-Bus System Ridership**

**Opportunities:**
Centro- Bus has developed a model program for Onondaga County that may be replicated in conjunction with Cayuga County, the City of Auburn and the business community. The US Department of Energy Central New York Clean Cities Project has demonstrated the ability to work with Centro-Bus in the Syracuse area for the creation of public education campaigns.

**Constraints:**
No local agency, organization or point person has been identified to coordinate such an effort. Business has shown limited interest in undertaking programs to encourage employees or customers to increase utilization of Centro-Bus or to shop local. New bus stops and schedules are not effectively communicated to potentially new riders.

8. **Encourage Business to Establish Programs to Encourage Corporate Carpooling at the Workplace and Procurement Alternative Energy Vehicles**

**Opportunities**
Businesses have the opportunity to start with small incentives, such as more convenient parking spots for those who carpool or purchase alternative fuel vehicles.
The comprehensive program established by National Grid serves as a model for Central New York business. National Grid has a mission to establish itself as the corporation with lowest employee carbon footprint in the nation. The company gives a cash incentive of up to $6000.00 dollars to employees who make the decision to purchase alternative fuel vehicles.

**Constraints:**
The area's private sector has yet to develop a coordinated program to educate and synergize employees to carpool or invest in alternative fuel vehicles.

9. **Enhance Municipal Use of Alternative Fuel Vehicles**
**Opportunities:**
The US Department of Energy Central New York Clean Cities Program and the New York State Energy Research Development Authority have partnered to provide subsidies to municipalities who are signed up members of the Clean Cites Program and seek to purchase alternative fuel vehicles. The program is available to towns and villages, as well as cities. NYSERDA also has a grant program to cover 50% of the cost of certain alternative fuel stations.

**Constraints:**
The Sustainability Needs Assessment Questionnaire indicated that many municipalities are not aware of potential federal and state assistance. Municipalities need to develop long term programs to replace current vehicles with alternative fuel vehicles as existing vehicles reach maintenance limits.

10. **Expedite Municipal Permit and Approval Processes for Sustainable Development, Redevelopment and Improvements**
**Opportunities:**
This is a policy reform which requires minimal municipal investment, but has the potential for substantial benefits such reduced storm water runoff, energy conservation and increased workplace morale.

**Constraints:**
Municipal employees have shown resistance to change or have not received adequate education on the benefits of policy reforms or the numerous model codes which are in place across the country. Municipal advocacy and education groups, such as the New York State Association of Towns, need to provide leadership in sustainable municipal education.

11. **Increase the Volume of Non-Recyclable Waste Tipped at the City of Auburn Landfill**.
**Opportunities:**
Increased use of the City of Auburn landfill by private haulers providing disposal services to other town and villages in Cayuga County will generate additional revenue for the City. This constitutes an additional waste stream of approximately 80,000 tons each year. This additional tipping fee revenue can be used to further offset the landfill operating costs, as well as create a source of additional revenue, to invest in public education on waste reduction, reuse and recycling.

As the City landfill is closer than Seneca Meadows, haulers may reduce fuel costs along with their carbon footprint.

**Constraints:**
The Seneca Meadows Landfill offers independent waste haulers tipping fees that are competitive with the City of Auburn. Currently Seneca Meadows' tipping fees range from $22.00 to $50.00 per ton in comparison to $72.00 per ton at the City of Auburn Landfill. However, the City offers a reduced tipping fee of as low as $38.00 per ton for haulers who commit to tipping a minimum of 3500 to 6000 tons per year.

Some independent haulers are unaware of this sliding scale threshold offered by the City. Additionally, if haulers would agree to use the City landfill as a group, the tipping fees would be further reduced as a result of increased volume and the ability to possibly negotiate a group rate.

12. **Increase and Track Participation in Curbside and Drop-off Center Recycling Programs**
**Opportunities:**

New York State is anticipated to require counties to update their Solid Waste Master Plan. The county, city, towns and villages have the opportunity to re-evaluate their waste reduction, recycling and composting programs. The option of providing city residents with a single curbside recycling day for all materials rather than rotating weeks for paper, metal and glass may increase participation rates. Municipalities may also assess the costs and benefits of Volume Based Pricing to establish equity and benefits for those households and apartments which recycle more and contribute to reduced waste handling costs.

**Constraints:**
To establish itself as a state and national leader in solid waste management the county and city must identify resources for additional public education and sustainability management. Currently public education is provided by one, half time person at Cornell Cooperative Extension and some limited time by County Planning and Development.

The county or city lacks a measurable tool to track participation in curbside, business and institutional recycling programs. This barometer is essential to identify policy and program gaps which should be addressed to increase recycling rates.

**13. <u>Establish Waste Reduction, Reuse, and Recycling Programs in all County, City, Town and Village Facilities.</u>**
**Opportunities:**
Strong and established markets for office paper recycling provide the City of Auburn and area municipalities with the opportunity to expand recycling efforts to all government buildings. Comprehensive, well correlated government recycling programs will further enhance the city as a national leader in small city sustainability. These programs are low overhead and often organized on a volunteer basis by municipal green teams. The county and city have demonstrated the extemporary leadership in alternative energy necessary to establish a gold star in house green waste management program.

**Constraints:**
Addressing the absence of government waste reduction, reuse and recycling programs generally requires ongoing employee education and morale building to encounter resistance and communicate cost savings, which can then be applied to other department priorities.

**14. <u>Encourage Corporate/Business Waste Reduction, Reuse and Recycling Programs</u>.**
**Opportunities:**
Identifying and negotiating market agreements for recycled office paper are enhanced if government office paper recycling programs are also in place.
Businesses are now aware that it is profitable to become green and market them as “green and sustainable”.

Certainly corporate waste reduction, reuse and recycling programs are a measure of this commitment. With companies competing to become green leaders, simple measures such as community recognition awards and Web Site profiles will enhance the growth of corporate recycling programs.

**Constraints:**
The area needs to identify a non-profit entity, such as the Chamber or Cayuga Community College, to evaluate corporate waste reduction and sustainability practices and discourage green washing practices or public relations.

**15. <u>Continue Participation in the P- Project to Protect Local Watersheds and Promote Phosphorous Reduction in Fertilizers, Detergents and Dock Soaps</u>.**
**Opportunities:**
The Cayuga County Phosphorous Reduction Program (P-Program) public education program provides a

proven institutional framework and program to assist in high quality water management. The program provides a springboard for the establishment of a regional storm water management district with a full or part time manager possibly funded thru inter-municipal agreement.

New York State has a proven record of financial commitment to watershed and storm water management.

**Constraints:**
Identification of an ongoing funding source is required for the establishment of a storm water management district and manager.

**16. <u>Encourage Creation of Bio-retention Facilities and Use of Permeable Pavements in Parking Areas</u>.**

**Opportunities:**
Cayuga County and the City of Auburn provide a unique urban-rural setting to establish a landmark Sustainable Bio-Retention program including eco-swales, eco-wetland mitigation, native plants for landscaping and encouraging the use of permeable pavement for retail and commercial parking lots. These efforts should build off the successful P-Program and can be encouraged by smart growth, public policy such as planning and zoning code incentives. These practice storm water management policies require minimal public investment.

**Constraints:**
The private sector lacks the infusion of public education required to build awareness of the economic and environmental benefits of these best management practices. Few municipalities in the region have established planning and zoning code and public funding incentives.

**17. <u>Build Awareness of the Environmental, Health and Academic Benefits of Healthy High Performance Schools among PTA, School Employees and Students</u>.**

**Opportunities:**
An abundance of funded government programs and organizations are capable of working in partnership with the Greater Auburn School District to expand awareness of the academic, health, environmental and taxpayer benefits of Comprehensive Healthy High Performance Schools. These include Healthy Schools of New York, the New York State Apollo Alliance, the Sierra Club, New York State United Teachers and the Upstate Chapter of the US Green Building Council.

**Constraints:**
An organization or point person needs to be assigned responsibility to coordinate the public outreach and education. Sustainable course curriculum should be developed by the Greater Auburn School District.

**18. <u>Undertake a Cost-Benefit Analysis of Replacing Non- Renewable Energy on Auburn Enlarged School District Campuses with Wind, Solar, Geo-thermal Heating and Cooling and Natural Gas Wells</u>**

**Opportunities:**
The Auburn High School is located in an area ideally suited to use a hybrid of alternative energy technology to establish a carbon neutral school. These assets include soil conditions conducive to geo-thermal heating and cooling, on site natural gas wells and, potentially, the use of wind and solar technology.

The Auburn Enlarged School District has demonstrated exemplary leadership and enthusiasm to capitalize on these sustainable, natural resources. The District is seeking NYSERDA funding to conduct the necessary cost-benefit analysis prior to investing in wind, geo-thermal heating and cooling and natural gas.

**Constraints:**
In the event wind energy is deemed technically and economically cost effective on the high school grounds, the district may need to identify a partner for the construction and maintenance of the wind turbines.

19. **Encourage Residents, Business and Government to Buy and Sell Local Products Such as Produce**.
**Opportunities:**
A significant portion of the area economy depends on the success of the agricultural community. Rising costs of food, related to the increasing cost of transportation, increased demand for organic produce and abundant farm land present the opportunity for a new Sustainable Cayuga Agricultural Economy. Wegman's and other large chain markets are witnessing increased demand for locally grown organic fruits and vegetables. Existing weekly farmers markets and curbside markets provide a base for this re-emerging economy.

**Constraints:**
The greater Cayuga County community, including the Chamber, farmers, restaurants, BOCES and other organizations, should be encouraged to create a collaborative buy local campaign. This may include a necessary on line and print copy of the location and operating times of regional and curbside markets.

20. **Organize a Roundtable Discussion on "Pathways to Green Collar Jobs" Including Area Business, Academic Institutions, Unions and Government**.
**Opportunities:**
The prepared "City of Auburn and Cayuga County Comprehensive Energy and Sustainable Development Plan" documents the leadership, alternative energy projects, natural resources and human energy necessary to establish the City of Auburn as the center point of green collar job development in central and western New York State. These opportunities include the unique location of diverse green industries such as Nucor Steel, McQuay International (geo-thermal) and Owens-Corning.

A range of public, private, non-profit and educational institutions are in place to provide the outreach and training required to meet the emerging employment requirements of green industries. These include the Central New York AFL-CIO Workforce Development Institute, Cayuga Community College, Cayuga-Onondaga BOCES, and the SUNY Collage of Environmental Science and Forestry.

Further, a number of state agencies including NYSERDA and the Empire State Development Corporation are making green collar job development a priority.

The atmosphere and academic mindset is in place to establish cooperative education needs assessment and training opportunities for a new generation of regional green collar jobs.

**Constraints:**
A new level of communication and interaction is needed among educational institutions, unions, government, green manufacturing , construction and installation companies to ensure Central New York has the capacity to offer and meet the demands for the green labor force.

# Part 8 Framework and Greenprint for Action for Comprehensive Sustainable Energy and Development

### 8.1 Establishing the City of Auburn and Cayuga County Sustainable Steering Committee-CCSSC

**Initiate – February 2009 Ongoing**

The City of Auburn and Cayuga County Sustainable Steering Committee (CCSSC) shall serve as the vehicle for coordinating the development and implementation of policy and programs necessary to achieve the recommendations in this master plan. Sustainable/renewable energy issues impact the whole of the County, urban and rural areas alike, and energy-related benefits could be available to local residents as well as municipal administrators should the City of Auburn and Cayuga County's power agencies (City of Auburn Public Power Agency and Cayuga County Public Utility Service Agency) find the ways and means to work together on such issues.

Historically, there have been beneficial interactions between CCPUSA and APPA as members of each of the power agencies have enjoyed seats on the corresponding agency's Membership Board. That said, greater efficiencies may be possible if a more "formal" relationship were established. If, for example, the regular monthly meetings of each of the agencies, CCPUSA and APPA, were *officially* open to the total membership of the corresponding municipal power agency, including the receipt of relevant agendas and past meeting minutes, the knowledge base of the members of each agency regarding sustainable/renewable energy issues being addressed by the corresponding agency might well be advanced. Such an occurrence would likely enhance the potential for meaningful sustainable/renewable energy-related accomplishments and outcomes for the whole of Cayuga County.

If, in fact, a Sustainable Energy Steering Committee is created as an outcome of the efforts made by County and City volunteers and officials associated with the City of Auburn and Cayuga County Sustainable Energy Summit – which was held May 31, 2008 at the Cayuga Community College – the cooperative interactions on the part of the memberships of both public utility agencies, participating together for the benefit of Cayuga County as a whole, could serve as the coordinating entity for the Steering Committee. Each of the eight sustainable task forces would then coordinate their activities under the umbrella of the Steering Committee. A suggested organizational chart appears in Appendix A.

The organizational objectives of both the Cayuga County Public Utility Service Agency and the City of Auburn Public Power Agency, more likely, will be furthered by viewing the greater community's sustainable/renewable energy future jointly. This will add greater understanding, increased vigilance, and more productive energy to the agencies' task of assisting our respective constituencies to achieve meaningful energy-related improvements now and in the future.

The committee would ideally consist of the individuals serving on the current stakeholders committee which has guided the preparation of the master plan. The City and County should invite representatives of other key area agencies, organizations, institutions and committees addressing sustainability to serve on the committee. This will help ensure that other sustainability efforts are integrated and coordinated, prevent duplication, and help identify program gaps and funding resources on an ongoing basis.

It is recommended that the committee convene its first organizational meeting within 30 days of the City's and County's adoption of this master plan. The organizational meeting should have the following six operational objectives:

1. Agreement on the composition of the Committee.
2. Selection of the Chairperson, Co-Chairperson and Secretary.
3. Creation of a temporary sub-committee to prepare a mission statement, communication and decision making protocol and other guiding principals to ensure and enhance transparency in the committee's operations.
4. Identification of Chairs or Co-Chairs for each of the eight focus areas/task forces.
5. Recommendations for the selection of Committee staff including coordinator, administrative support etc.
6. Formation of a Finance Committee to develop a working budget to support committee and task force operations and serve as the ongoing framework for working with government and the private sector to identify financial support for the master plans recommended projects.

## 8.2 Short and Long Term Green Print for Action Sustainability Business Plan

Following adoption of operational objectives, the CCSSC will work with the designated staff to prepare a short term 2009-2011Green Print for Action Sustainability Business Plan focusing on the implementation of the top 20 recommendations identified in Part 7. Each recommendation would have an associated strategic path to progress and to monitor progress. These steps may include meetings with state agencies and officials, green forums for developers, Web site enhancement, pilot demonstration projects and preparation of grant applications. After the short term plan business plan is adopted by the Steering Committee, over the course of 2009, a longer five year plan will be prepared by staff and the CCSSC addressing additional recommendations contained in this master plan. The long term business plan should give special attention to the efforts of other area energy, environmental and economic development organizations with an emphasis on interacting to achieve joint missions and projects.

In consideration of the opportunities and obstacles identified in Part Seven of this plan, the City of Auburn and Cayuga County, along with the current master plan Stakeholders Committee and Larsen Engineers, suggest the following policy, program and funding priority initiatives, be considered in the 2009-2011 Greenprint for Action Sustainability Business Plan.

### 8.2.1 The Sustainable and Smart Growth Planning Web Site

**Initiate: March 2009**
**Kick Off: May 2009**

The Web site will be the joint responsibility of City and County Information Technology and Communication Managers. The site will offer citizens the opportunity to serve on one or more of the eight task forces and keep the general public aware of CCSSC Steering Committee and Task Force Activity. Importantly, the Web site can offer other area organizations, businesses, schools, government and labor the opportunity to share information on their sustainable policies and programs. This information sharing will enable the Web Site to serve as an On-Line Sustainability Library.

### 8.2.2 The City of Auburn Citizen Scientists

**Initiate: March 2009**
**Kick Off: May 2009**

The City, in conjunction with CCSSC and other environmental groups, may form a group of 10-20 grass roots citizen volunteers to manage an interactive blog on the Web Site aimed at responding to questions from the public on energy conservation, renewable energy, healthy schools and other task force action areas. The Auburn Citizen Scientists will research and offer their own creative ideas to enhance sustainability. The Citizen Scientists group should represent the average homeowner, small businesses, students etc., rather than professionals working within the realm of sustainability.
For example, the Citizen Scientists may provide information on the cost and installation of rainwater collection tanks or methods homeowners can use to construct own collection barrel

### 8.2.3 County and City Employee Inter-Municipal Green Team

**Initiate: April 2009**
**Ongoing**

This endeavor will focus on addressing and establishing a range of sustainability projects in-house. The Green Team should consist of County and City Facility Managers, Procurement, and others interested in volunteering to serve. The Municipal Green Team should address the following sustainable issues in the following order:

A. Establishment of municipal in-house waste reduction, reuse, recycling and green procurement programs. Waste and office paper recycling may be a starting point.

B. Implementation of the Energy Conservation and Renewable Energy recommendations contained in the City and County Office Building Energy Audit.

C. Sustainable Storm water Management and Water Conservation Practices at Municipal Facilities.

### 8.2.4 Green Revolving Loan Fund Study Committee

**Initiate: April 2009**
**Complete Study: July 2009**

The study committee would be charged with preparing recommendations for a fiscally responsible approach to legally creating, funding and administering the Green Revolving Loan Fund. Representation on the Committee should include the County or City Bond Counsel, the IDA Chairperson, IDA Legal Counsel, City or County Comptroller, and County or City Economic Development.

### 8.2.5 Address the Financial, Market, and Legal Issues Confronting the Cayuga County Public Utility Service Agency Centralized Bio-Digester Project.

**Initiate: Current**
**Complete: September 2009**

The Cayuga County Public Utility Service Agency (CCPUSA), or the County itself, should consider using its bonding ability to underwrite a 10 year purchase agreement for the generated bio-gas from Cayuga Renewable Energy. CCPUSA could then sell the power to the City and County for municipal use and establish an agreement with a private industry such as to purchase the surplus power at market rate. Once an underwriting agreement is in place, Cayuga Renewable Energy will be in a stronger position to leverage private sector, US Department of Agriculture and NYSERDA grants, loans and tax credits to fund construction.

**8.2.6 Seek Funding to conduct a Mini- Hydro Feasibility Study and Demonstration Project**
**Initiate: May 2009**
**Complete May 2010**

Development of mini- hydro power will require that the City secure a combination of private and public (NYSERDA) funding for a feasibility study of the entire Owasco River. The Study will identify potential locations for on-site generation, customer, costs and benefits. Ideally the study will include funding for a demonstration City - private sector low flow, low head project.

**8.2.7 Identify a Point Person or Agency to Increase Centro- Bus Ridership**
**Initiate: May 2009**
**Complete: Ongoing**

Cayuga County and the City of Auburn should require a point person, agency or committee to design and implement a marketing program which will increase bus ridership and encourage car pooling. This project may be coordinated by the CCSSC Transportation, Parks, Recreation and Open Spaces Task Force in conjunction with Central New York EPA Clean Cities and the Auburn Chamber of Commerce.

**8.2.8 Establish a Performance Based-Shared Savings Relationship Between A Wind Development Company and The Greater Auburn Central School District**.
**Initiate: Currently Under Way**
**Complete: June 2010**

The School District has undertaken preliminary efforts to utilize wind power at the Auburn High School. Opportunities may exist to enter into a shared cost saving agreement in which a wind company provides funding for the project development and is paid back by sharing the school's energy cost saving.

A necessary first step is to obtain funding for a technical and economic feasibility study. The New York State Energy Research Development Authority (NYSERDA) provides the opportunity for municipalities to obtain a 50-50 matching grant up to $50,000 for a wind study.

**8.2.9 Prepare a Cayuga County Resource Workbook Summarizing Model Municipal Laws, Codes and Policies Which Encourage Sustainable Development and Renovation**.
**Initiate: June 2009**
**Complete: September 2009**

Model legislation and codes, which promote practices consistent with US Green Building Council guidelines, will educate and encourage the City, towns and villages to adopt incentives for sustainable economic development. The models should review a range of traits associated with sustainability including the use of permeable pavements for storm water management, natural lighting and geo-thermal energy.

**8.2.10 Organize A Roundtable Discussion on "Pathways to Green Collar Jobs".**
**Initiate: April 2009**
**Complete: September 2009**

Enhancing the growth of green collar jobs in Central New York requires meeting the training and employment needs of current green industries. As a starting point, a day long roundtable and strategy session will enhance dialogue among key stakeholders involved in Green Collar Job Development. The roundtable will begin to identify existing and needed green collar job training, communication tools to make students and displaced workers aware of green collar employment opportunities and policies to recruit new green collar industries to the City and County.

A Roundtable Planning Committee may consist of Cayuga Community College, Central New York Workforce Development, the Auburn Chamber of Commerce, and trade unions, Auburn High School, BOCES, the New York State Apollo Alliance and CCSSC.

**8.2.11 Additional Projects for Consideration**

Additional short term projects may include a demonstration, Downtown Rain Garden, designed by Auburn High School Science Club and BOCES students, an area wide LEED panel forum for developers sponsored by the Chamber, a directory and map of public and curbside markets, an educational outreach program encouraging restaurants to adopt green management practices, and a targeted low income weatherization program.

The City Department of Solid Waste may consider on-going brainstorming sessions with independent haulers to increase use of the City landfill

**8.3 Recommended state Initiatives for New York State Energy Master Plan Committee, state agencies and elected officials. Note: The Draft State Energy Master Plan is currently being drafted with public hearings to be held in spring 2009. However, recommendations are now being accepted on the State plans website.**

**8.3.1 The State of New York identify a mechanism to underwrite insurance for municipal and first time private sector alternative energy projects such as the Cayuga County Public Utility Service Agency Centralized Bio-Digester Project.**

**8.3.2 The State of New York establish a Leadership in Environmental and Energy Design Low Interest Revolving Loan Fund. Such a fund will encourage energy conservation consistent with state goal, spur investment in green buildings and create green collar, blue collar and white collar jobs. The New York State Environmental Facilities Corporation Revolving Loan Fund may serve as a model for the LEED Loan Fund.**

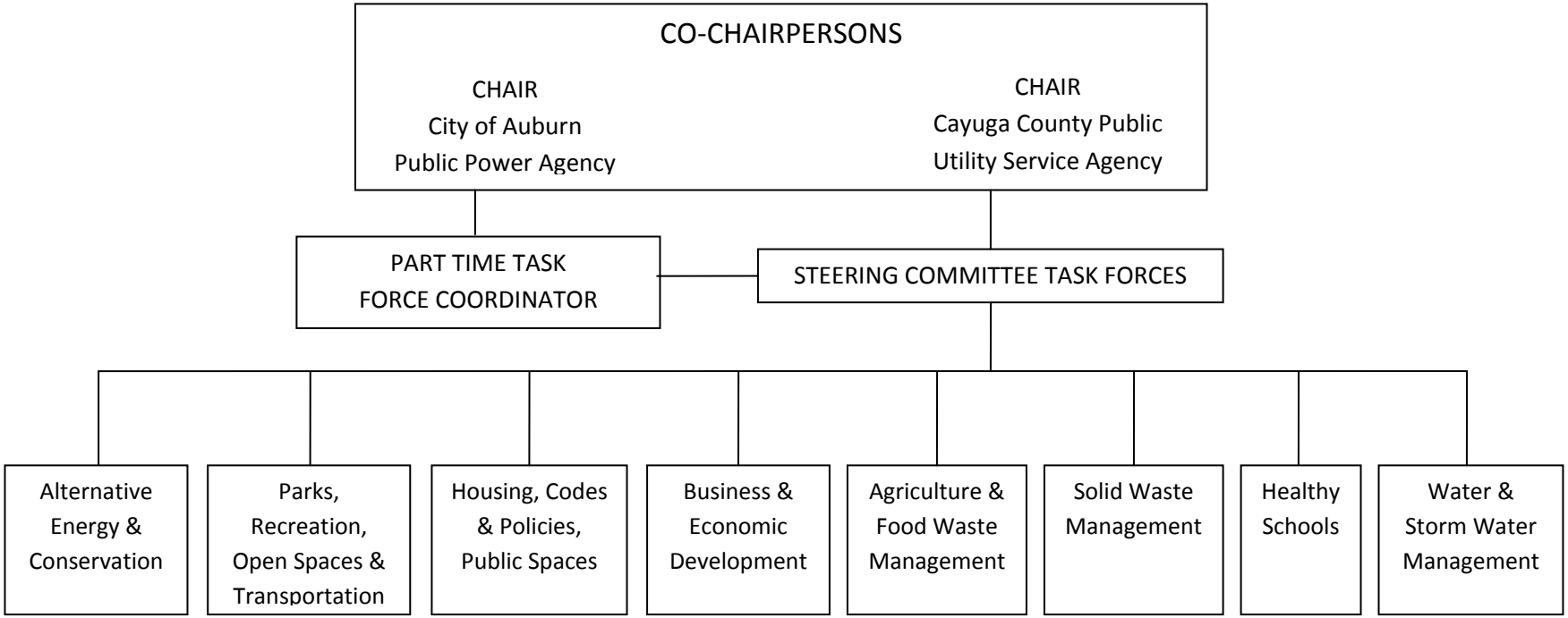
**8.3.3 The State of New York undertake an assessment of the capacity and condition of power Transmission lines to transport increased loads of wind power.**

**8.3.4 A GREEN Collar Workforce Training Grant, loan or Tax Credit Program be established by the State Department of Labor or NYSERDA.**

**8.3.5 NYSERDA develop a grant program to assist elementary and high schools in the development of sustainable water conservation and storm water management practices.**

# APPENDIX A

## CITY OF AUBURN AND CAYUGA COUNTY SUSTAINABLE ENERGY STEERING COMMITTEE ORGANIZATIONAL STRUCTURE




NOTES:

1. Monthly meetings of task forces first 3 weeks of each month.
2. Monthly steering committee meeting fourth Monday of month.
3. Monthly report (written or oral) to County Legislator fourth Tuesday of month.
4. Monthly report to City Council fourth Thursday of month.
5. Annual September/October summit.

# Appendix B
# Needs Assessment Questionnaire

## Respondents:

**Dave Miller**
315-834-6067
Dave329@twcny.rr.com
Town Councilman: Town of Brutus

**Douglas (Doug) Ververs**
315-255-1183 ext. 235
Dhv1@cornell.edu
Executive Director: Cornell Cooperative Extension of Cayuga County

**Jean James**
315-497-3135
jjames@scccinternet.com
Supervisor: Locke

**Rick Slagle**
315-497-0250
Supervisor: Town of Niles

**Ed Epprecht**
315-626-2702
edeppy@aol.com
Mayor: Village of Meridian

**Gary Searing**
315-255-8014
flemingsupervisor@adelphia.net
Supervisor: Town of Fleming

**Dennis H. Zach**
315-730-9662
Dennyz@hammond-Irving.com
Member: Public Power Agency; retired energy and project advisor for local steel industry

**Bruce Natale, P.E.**
315-253-1203
envengr@co.cayuga.ny.us
Environmental Engineer, Cayuga County Planning Agency

**Larry Garuccio**
315-255-8818
Lawrence_Garuccio@auburn.cnyric.org
Superintendent of Buildings and Grounds, Auburn Enlarged City School District

**David S. Gould**
315-253-4337
dgould@cayugacounty.com
Sheriff, Cayuga County Sheriff's Office

**William McVea**
Mayor, Village of Fair Haven

**Gary Duckett**
315-253-1166
garyd@cayugacounty.us
Park Maintenance Supervisor- Cayuga County Parks and Trails

**Gerald DelFavero**
315-255-4737
Jdelfavero@ci.auburn.ny.us
Supervisor- Public Works

**Jean B. Saroodis**
315-834-6634
vweedsport@weedsport.com
Mayor- Village of Weedsport

**Mike Talbot**
315-252-9246
mtalbot@ci.auburn.ny.us
Supervisor- Solid Waste, City of Auburn

**Charles Mike Hammon**
315-255-4195
mhammon@ci.auburn.ny.us
Fire Chief- City of Auburn Fire Department

**Michele Wunderlich**
315-253-1107
mwunderlich@co.cayuga.ny.us
Senior Planner, Cayuga County Department of Planning and Economic Development

**William Lupien**
315-255-4129
wlupien@ci.auburn.ny.us
SVCS Superintendent, Engineering

**Frank Howe**
315-253-1276
fhowe@co.cayuga.ny.us
Sr. Economic Development Planner, Cayuga County Department of Planning and Economic Development

**Marlene Bryant**
315-255-4115
mbryant@ci.auburn.ny.us
Economic Development Program Manager, City of Auburn Office of Planning and Economic Development

## Questionnaire

1. Contact Info: Name: _____
   Phone Number: _____
   E-mail Address: _____

2. Position and Department: _____
   With Agency (Name):_____

Note: "Agency" will also refer to government, organization, institutions, company, or similar service providing entity. "Department" is a part of an agency with separate but related functions.

3. What are your responsibilities and Job function for the City of Auburn / Cayuga County / Town or Village, etc.?

4. What services does your Department or Agency provide?

5. What Planning efforts have been done in the past which describe existing conditions and identify the Priorities for improving your Department or Agency?

6. What maps, plans or reports do you have or know about which can assist in this planning project?

7. List the green initiatives (for cost savings or to improve the environment) undertaken by your Agency or Department in the past 5 years or planned to be done in the future?

8. Considering all the areas of community services, what would be your "Top 3" projects, programs, or cost saving recommendations to focus on, in order to achieve greatest benefit to the Community?

9. Are there any problems or inefficiencies in the work area that hinder your ability to perform the tasks and duties that you Agency / Department performs?

10. Please list any improvements in your Agency/ Department that can achieve green goals of conservation and cost reduction?

Examples: Inefficient lights, automatic shut off in unoccupied areas, changing fuel source vehicles running when parked, relocating facilities, sharing equipment.

11. What barriers do you foresee to implementing Green Initiatives in your Agency or Department?
Check all that apply:
Staff Resistance: _____
Leadership: _____
Funding: _____
Incentives: _____
Staff Education: _____
Community Support: _____
Other: _____

12. Are you aware of any citizen groups, Churches, organizations that are active in promoting Green Initiatives in the Auburn and Cayuga County Area?

13. Are you aware of any consultants, vendors, or manufactures that provide services or equipment that promote green initiatives that are located in the Auburn and Cayuga County area?

14. Do you have any other comments or suggestions that can help this planning process?

**Please fax this form to Larsen Engineers at: 585-272-0159 or E-mail:** ram@larsen-engineers.com
**BY MARCH 14TH, 2008.**

**Thank you for your time and attention.**

# Appendix C

# Key Agencies, Institutions and Organizations "Participating in Sustainability Option & Providing Sustainability Leadership"

## Agencies/Departments

### City of Auburn Public Power Agency

Memorial City Hall
24 South Street, Auburn NY, 13021
Phone: (315) 255-4146 Fax: (315) 255-4735
Contact Person: John R. Montone, Chairman
Email: eboyce@ci.auburn.ny.us
Services: The Public Power Agency consists of a nine-member board that acts as an advisory board to the Council and City Manager. The agency was established by Local Law No. 1 of 2004 to determine, develop, and implement the delivery of low cost, safe and reliable public energy services to the inhabitants of the City of Auburn, NY. The Agency on behalf of the City will establish and operate a public power utility service, gas utility service and alternative energy service for the purpose of furnishing to the City inhabitants low cost energy and to promote economic development with the use of reliable sustainable alternative energy. The entire economic development effort is to focus on clean energy and bio-sciences which are designed to attract businesses that share a commitment to sustainability.

### Cayuga County Public Utility Service Agency
### Cayuga County Department of Planning & Economic Development

5th Floor, 160 Genesee Street, Auburn, NY 13021
Phone: (315) 253-1276 Fax: (315) 253-1499
Contact Person: Frank Howe
E-mail: fhowe@co.cayuga.ny.us
Services: The Cayuga County Public Utility Service Agency (CCPUSA) was established with strong community support by a County-wide referendum in November 2005. CCPUSA's public mandate and the local law enacted to support it provide the basis for the Agency to address significant opportunities available to the County associated with the development of renewable energy technologies.

### Cayuga County Department of Planning and Economic Development

5th Floor, 160 Genesee St., Auburn, NY 13021
Phone: (315)253-1276 Fax: (315)253-1499
E-mail: planning@co.cayuga.ny.us
Website: www.co.cayuga.ny.us/planning
Services: Revitalize hamlets, rural villages and rural "four corners" communities by attempting to reinvigorate main streets, rehab housing and promote business development. Encourage agricultural preservation, agribusiness development, natural resource management, open space protection, and thoughtful transition from agriculture or open space to development.

### City of Auburn Department of Public Works
358 Genesee Street, Auburn, NY 13021
Phone: (315) 255-4120 Fax: (315) 252-7688
E-mail: jdelfavero@ci.auburn.ny.us
Website: ci.auburn.ny.us
Services: Provide sustainable recreational facilities and programs for the residents of Auburn.

### Cayuga County Habitat For Humanity
169 Genesee St., Auburn, NY 13021
Phone: (315)-255-1427
Website: www.habitat.org
Services: Houses are built and renovated, then sold to partner families at no profit and no interest.

### Cayuga County Office of Tourism
131 Genesee St., Auburn, NY. 13021
Phone: (315) 255-1658 or 800-499-9615 Fax: (315) 255-3742
E-mail: info@tourcayuga.com
Website: www.TourCayuga.com.
Services: Stimulate economic growth and promote the quality of life thru promotion of local events, educational workshops, and tourism training.

### Cayuga County Department of Parks & Trails
6914 E. Lake Rd., Auburn, NY. 13021
Phone: (315) 253-5611
E-Mail: parks@co.cayuag.ny.us
Website: www.co.cayuga.ny.us.parks
Services: Provide Cayuga County residents and tourists recreation activates in sustainable parks, trails and nature centers.

### Cayuga County Soil and Water Conservation District
7413 County House Rd., Auburn, NY 13021
Phone: (315) 252-4171 Fax: (315) 252-1900
E-mail: cayugaswcd@cayugaswcd.org
Website: www.co.cayuga.ny.us/soilcon
Services: Conservation Education - Initiate and manage programs that address water quality management, stream stabilization, pond management and erosion control.

### Cayuga-Onondaga B.O.C.E.S.
Main Campus: 1879 West Genesee Street Road, Auburn, N.Y. 13021
Phone: (315) 253-0361 – Fax: (315) 253- 6361
Website: www.cayboces.org

## The Center for Learning

12 Allen St., Auburn, N.Y. 13021
Phone: (315) 253-4899 Fax: (315) 253-2972
E-Mail: c4learn@cayboces.org
Services: Career & Technical Education – Construction and building trades, health related occupations, sciences, residential and industrial electricity.

## Cornell Cooperative Extension of Cayuga County

248 Grant Avenue
Auburn, NY 13021
Phone: (315) 255-1183 Fax: (315) 255-1187
E- Mail: cayuga@cornell.edu
Website: www.cce.cornell.edu/cayuga.html
Services: Enhancing the Environment- Help youth and adults achieve a better understanding of the links between personal choices and the effect they have on the environment. Organizes and partners to conduct recycling events such as household hazardous waste round, electronics and tire round up.
Master Gardner Program - Highly trained volunteers provide a seasonal help line for county residents, providing answers to gardening problems. Also provide workshops in items such as pruning, houseplants, etc. Help-line: (May 1- Mid October), Monday, Wednesday, Friday; 10:00 am- 12:00 noon.
Energy Conservation Consumer Education- Offer a variety of programs oriented to household budgeting, personal finance and home energy conservation issues.
Agriculture Projects: Education programs to support through viability and profitability of agriculture and related businesses, including: Field Crops, Soil Testing, Soil Survey, Nutrient Management, Pest Management, Pesticide Application Certification, Manure Management, Anaerobic Digestion, Renewable Energy, Organic Field Crop Production, Organic Dairy Farmers, Farm Safety, Farmland Protection, Ag Business, Crop Insurance and Risk Management. Free phone consultation and consultation related to crop production and animal husbandry, with site visits as needed. Also a sponsor of the Cayuga County Agriculture Promotion Council.

## Cayuga/Seneca Community Action Agency, Inc.

65 State St., Auburn, N.Y. 13021
Phone: (315) 255-1703 Fax: (315) 252-3397
E-mail: site1@csaa.com
Website: www.csaa.com
Services: Assist people to achieve self-sufficiency. Provide direct services to reduce energy burden in both single family and multi-family houses.

## New York State Department of Labor
## Cayuga Works Career Center

199 Franklin St. Suite 100, Auburn, NY 13021
Phone: (315) 253-1590 Fax: (315) 253-1135
Website: www.labor.state.ny.us
Services: One of the State's primary advocates for job development creation and economic growth through workforce development.

## Institutions

### Cayuga Community College

Auburn Center: 197 Franklin St., Auburn, NY 13021
Phone: (315) 255-1743 Fax (315) 255-2117
Fulton Center: 806 W Broadway; Fulton, NY 13069
Services: Committed to being the community college for both Cayuga and Oswego Counties, the Cayuga Community College offers transfer and career-oriented curricula on a degree and certificate basis. Popular programs include liberal arts, education, broadcasting, studio art and design, business, nursing, and criminal justice. The geographic information systems program—providing hands-on training in the high-tech field of space-based mapping and imaging—enjoys a special relationship with the NASA-sponsored Institute for the Application of Geospatial Technology, located on the Auburn campus.

### Central New York Center for Workforce Development (CNY Works)

443 North Franklin St., Syracuse, NY 13204
E-mail: info@cnyworks.com
Services: CNY Works is a local, not-for profit corporation, focusing on Central New York, which receives federal funding through the Workforce Investment Act of 1998. It is our mission to connect job seekers, employers, and training services into a coherent network of resources.

## Organizations

### Cayuga County Chamber of Commerce

36 South Street, Auburn NY 13021
Phone: (315) 252-7291
E-mail: contact@cayugacountychamber.com
Website: www.cayugacountychamber.com
Services: Originally conceived as an organization of businesses involved in trade, today's Chamber has come to see itself as a leader in promoting all the positive aspects of Cayuga County, including natural beauty, rich history, cultural events, educational excellence, and its positive environment for economic growth.

### Auburn Downtown Business Improvement District (BID)

2 State Street, Auburn, NY. 13021
Phone: (315) 252-7874
E-mail: aubdphid@centralny.twcbc.com
Website: www.auburndowntown.org
Services: A valuable resource committed to research, advocacy, marketing, promotion, event planning, and collaborative efforts to strengthen and revitalize the Downtown Auburn Business Improvement District (BID) consistent with generally accepted principals of sustainable economic development