Chapter 6: Energy

Key Energy 2030 Goals

For the purpose of this plan, energy was a broad topic that encompassed energy consumption in buildings, transportation energy and renewable energy generation. Energy is highly influenced by outside entities and regulators, including Ameren Utilities, the State (Illinois Commerce Commission), the PJM regional electric grid that covers 13 states, as well as the federal government.

The goals of Sustainable Decatur reflect both deliberate local action, combined with regulations and requirements set forth by these outside parties, expected technological advances, and increased funding opportunities. As such, some goals reflect a timeframe that reaches beyond 2020:

- **Energy consumption in Decatur will be reduced by 25% in households and 10% for commercial and industrial use by 2030.**

  Energy costs are a crucial expense that has risen over time and thus making housing less affordable. However, energy costs can be reduced at the household levels through energy efficiency. Gains in energy efficiency are particularly important for older homes, and can be accomplished through a number of strategies. In addition, new construction standards should require greater energy efficiency. Household energy use combined with commercial uses account for 30% of Decatur's total energy usage. Looking outside of the household energy usage levels about 70% of energy consumption in Decatur is for industrial uses. While changes to industrial energy consumption may be impacted by state and federal policies and regulations, reduction of energy consumption in this sector is possible.

In the commercial and residential sectors, multiple energy efficiency programs and funding sources exist and will likely continue to grow, including at both the federal and state government level, as well as through utility programs. A 25% reduction per household and 10% for commercial & industrial uses in energy consumption is possible through greater efficiency and consumption reduction both of which are possible through technological advances and lifestyle changes.

- **Renewable energy sources will account for 25% of all electricity usage by 2030.**

  Currently, the City receives approximately 5% of its electric energy usage from renewable energy sources, which matches what is required by the Illinois renewable portfolio standard. Illinois, and in particular central Illinois, is ideal for the production of wind energy. Recognizing this, state laws have been amended to mandate an increase in the percentages of renewable energy for electric utilities. The state now requires that by 2025, all major electric utilities will have an energy portfolio that includes 25% renewable energy, 75% of that coming from wind. The region's agriculture culture and focus on improvements to bioenergy also make Decatur an ideal location for the installation of a biomass-powered combined heat and power plant. With advances in technology and reduced costs of such technology, multiple forms of renewable energy will be a more cost effective proposition in the future.

- **Bicycle, pedestrian and transit trips will increase by 25% by 2030, while vehicle miles traveled (VMT) per capita will be decreased by 25% by 2050**.

  Vehicle miles traveled (VMT) is a standard measure to describe automobile use on a daily or annual basis. It incorporates both the number of vehicle trips and the length of those trips. A 25% reduction would reduce total VMT in Decatur from 15,188 to 11,391 by 2050. A 25% reduction in VMT is possible through increased public transit usage, increased pedestrian/bicycling opportunities, and better physical connections and shorter distances between residential uses and employment.

The goals, strategies and projects set forth in this section of the Decatur Sustainability Plan are vital to the city's long term viability. Understanding energy and how it is consumed is important for two reasons, one part consumer, one part environmental stewardship:

- Rising energy costs: The cost to produce energy for electricity and natural gas are rising; oil and thus gasoline costs are rising. A reduction in consumption means less dollars spent on energy bills. This bottom-line result is meaningful at the household level to the small business to the school district to the municipal government.
- Energy in buildings / transportation account for highest greenhouse gas emissions: Nationwide, over 90% of all emissions are a result of the consumption of energy in buildings (electricity and natural gas) and transportation energy (oil, petroleum, gasoline). A significant reduction of energy consumption in buildings and by transportation will result in a reduction in emissions as well.

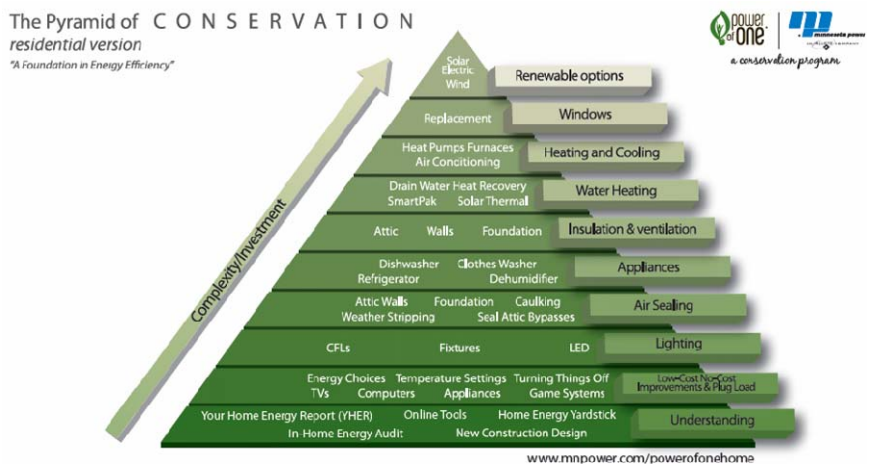
Below are some other key details that should be kept in mind during the discussion and formation of strategies and projects:

- All-Sector approach:

  Simply put, we all use energy, so we can all be a part of the solution. The key to involvement is crafting a request for action/involvement aimed at each audience. The residential sector, small businesses, as well as large commercial stores, industry, schools, hospitals and other institutions, and government agencies all can play a role in achieving Decatur's energy efficiency targets.

- Range of impactful energy behavior change:

  As Decatur delves into a range of strategies to use energy more efficiently, it is important to note that not all strategies are equal. Some strategies require very little of the person implementing them, and or minimal financial investment, while others are the very opposite. For example, CFLs are relatively straight forward and low cost; while an energy retrofit is much more complex and is a major investment. Similarly, the energy savings achieved by strategies can vary greatly. For example, if every light bulb in the city were exchanged for a CFL, the energy savings still would not amount to that which would be experienced if just a small amount of the housing stock were retrofitted.



This pyramid from Minnesota Power shows that a homeowner's first actions involve learning about energy efficiency, and a wide range of simple low/no-cost strategies. As these actions become more complex, they generally require a higher investment.

- Connectivity to other planning and sustainability issues:

  While energy is an important component of the Decatur Sustainability Plan, it does not exist in a bubble. It is related to other areas of this Plan as well as other City policies and plans. This should be kept in mind in the development of strategies and projects, and be understood that these projects are not the only ways energy can and should be addressed in Decatur. Below are some examples:
  - Land use patterns influence how far one has to drive to conduct daily business (transportation energy).
  - Infill housing taps into existing utility infrastructure instead of new fringe development, which requires the expansion of the system (land use/development).
  - Building codes influence how structures are built. (energy efficiency).
  - Zoning codes dictate how and what can be placed around/on your property. (renewable energy).

- Waste hauling is very energy intensive from collection (transportation energy) to processing (energy efficiency).
- Water treatment is very energy intensive (energy efficiency).

Understanding individual and collective energy consumption and taking action to use energy more efficiently is a key component of the Decatur Sustainability Plan, and can also serve as a foundation for a climate action plan or other environmental endeavors that the city chooses to embark upon.

Key Energy 2020 Goals, Strategies, and Projects/Actions

GOAL 1: *DECATUR WILL BE CONSCIOUS OF BUILDING ENERGY USAGE AND UTILIZE ALL TECHNOLOGIES AND TECHNIQUES TO INCREASE EFFICIENCY*

STRATEGY 1: PROVIDE INCENTIVES FOR IMPROVING ENERGY EFFICIENCY.

A significant energy investment one can make, and often an untapped resource, is to use energy more efficiently. Using less energy to do the same things is what energy efficiency is all about, and as such there are both environmental and economic benefits for doing so. Energy in our region comes primarily from the burning of fossil fuels, which are non-renewable resources. Using that energy more efficiently makes better use of our finite resources. Unchecked growth in energy consumption also means a rise in carbon emissions into the atmosphere, and this buildup creates negative effects known as the greenhouse gas effect, or "global warming." At an individual level, energy costs have risen dramatically in recent years and are not expected to fall. Using energy more efficiently makes good financial sense. During tough economic times like these, energy savings can make a huge difference at the household level all the way up to the large commercial enterprise.

Projects/Actions

1.1.1 Create energy assessments or energy audit programs for all sectors and identify options for providing assistance in the implementation of energy efficiency strategies identified (e.g. revolving loan fund, utility finance program).

The first step to being able to improve one's energy efficiency is to be able to benchmark energy consumption and identify areas for improvement. A comprehensive program will allow consumers to do this at varying scales. An energy audit is ideal, because a trained professional inspects the property and, with additional supplied information (e.g. improvements made, energy consumption data) makes a tailored list of energy efficiency recommendations that range from low/no-cost to high-investment ones, accompanied with projected savings. An energy assessment tool will provide consumers with a do-it-yourself kind of energy audit, making assumptions based on general data inputs

An energy auditor inspects a basement.

that the user is requested to supply. Both energy audits and energy assessments provide some measure of energy efficiency education to the consumer, and are an important starting point when encouraging energy efficiency actions to be taken. Potential actions to consider are:

a. Online do-it-yourself energy assessment tool.

b. Energy audit program (at-cost) that provides more specific energy efficiency strategies.

c. Identify a range of financing options for the implementation of energy efficiency recommendations.

1.1.2 Develop a retrofit program for residential and commercial sectors, and identify and/or create options for financing them.

A retrofit program, or a whole-home approach, moves beyond weatherization and just windows and doors to examine all systems in the house, from building envelope, to buildings systems (lighting; heating and air conditioning; major appliances) to its occupants and their behavior.

a. Develop a comprehensive retrofit program that is tailored to the unique needs (marketing, financing) for each sector: single-family residential; multi-family residential; small business; large commercial; and industrial. It may be advantageous at first to target one or just a few sectors.

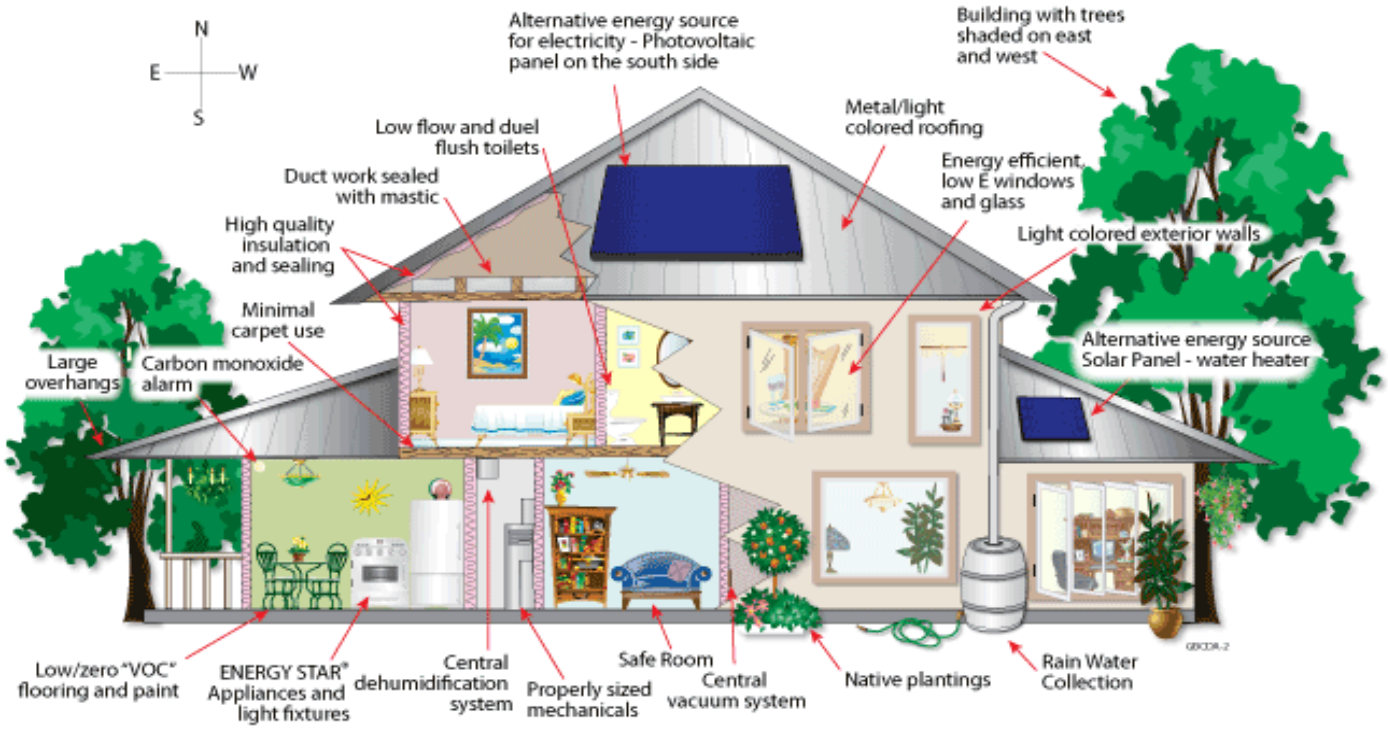
b. Research and investigate different funding opportunities for the program, considering different financing tools and mechanisms for each sector including but not limited to revolving loan funds, PACE bonds, energy efficiency improvement districts, and existing federal and state funds.

1.1.3 Obtain energy audits for all public buildings and implement energy efficiency strategies.

The City and other public agencies can show leadership in energy efficiency, and also educate the community by documenting its own energy consumption in publicly-owned buildings, as well as the energy efficiency strategies that are chosen for implementation.

a. Audit all public buildings and make available the audit reports of those buildings.

b. Develop an implementation plan for a select mix of the audit recommendations.



c. Publicly compare building consumption (e.g. Energy Star rating or by energy use intensity for community education.

d. Consider method for ongoing building performance monitoring to track energy consumption and address issues when they arise.

1.1.4 Promote and incentivize a green building program.

Green building programs, whether LEED (Leadership in Energy and Environmental Design from the US Green Building Council) or EnergyStar or some standard developed by the local community, are designed to create a standard measurement of energy efficiency and other sustainable characteristics in new construction. Programs vary nationwide, ranging from voluntary to mandatory, and often include incentives that include reduced permit fees, expedited permit processing, income tax credits, development fee waivers and more. This report high-lights successful incentives: http://www.naiop.org/foundation/greenincentives.pdf.

a. Market and recognize all LEED projects in Decatur.

b. Promote benefits of green buildings.

c. Research/identify incentives that might be best suited for Decatur.

STRATEGY 2: PROVIDE EDUCATION ON ENERGY EFFICIENCY.

"Go green" is becoming the mainstream media message splashed across billboards, television ads and newspaper articles. Most adults and even children have heard about the benefits of compact fluorescent light bulbs (CFLs). A nationwide survey in 2007 polled adults and found that 52% said that the issue of global warming was either extremely or very important to them personally, with another 30% ranking it somewhat important.[1] Despite rising concerns about climate change, our actions do not reflect the scale of change needed to help solve the problem. Small but significant behavioral changes, like turning off appliances and lights, reducing cooling temperatures and heating temperatures by 3 degrees in residential properties, and using programmable thermostats to control temperatures in commercial space, have the capacity to significantly impact energy and emissions savings. Translating our concerns into changing our personal habits would have substantial impact in reducing energy consumption and greenhouse gas emissions. However, in order for any behavior changes to occur, it is important that we communicate the following:

- Why should we take action?
- Who should take action?
- How is it done?
- What is the expected outcome and benefits for me? My community?
- Are there any costs, upfront or hidden?

Providing education on energy efficiency that targets certain sectors/consumers, and also for specific projects will engage the community, help break down certain myths (e.g. energy conservation means I have to be uncomfortable) and is a good vehicle to highlight best practices and success stories that emerge from the community.

Communities are getting creative about involving residents and businesses in energy efficiency. An energy challenge (above) is an easy way to get people thinking about small, incremental changes that lead to big savings over time. Utilizing engaging marketing and appealing graphics (below) is ideal.

Projects/Actions

1.2.1 Create an energy efficiency campaign/education that institutes and encourages behavioral change as a way of life and doing business, individually and collectively.

The City should develop a multi-faceted energy efficiency campaign that is heavily publicized with the rollout of the Decatur Sustainability Plan. This large scale communications plan should start with the basics by explaining how energy efficiency benefits the "me" in all sectors: the homeowner, the business owner, the college student, the large industry, the small business, and others.

[1] ABC News/Washington Post/Stanford University **Poll**. April 5-10, 2007. N = 1,002 adults nationwide. MoE ± 3. Fieldwork by TNS.

a. Develop a broad scale, multimedia energy efficiency campaign that targets different sectors and utilizes engaging techniques and graphics.

b. Develop a K-12 educational curriculum that augments the energy efficiency campaign.

c. Reach out to local colleges/universities for assistance in the campaign. (e.g. Marketing and communications; education curriculum design)

1.2.2 Establish a method for regular energy data collection and analysis by the City in order to measure ongoing sustainability efforts.

The initial baseline analysis for the City of Decatur involved a large amount of data collection and analysis. The City should continue collecting, analyzing and archiving data in order to gauge success, and pinpoint areas for improvement or refinement.

a. Establish dataset needs for ongoing collection and analysis.

b. Establish a data-sharing agreement with Ameren in order to retrieve citywide energy consumption data on a regular basis.

c. Develop a database for storing pertinent data.

1.2.3 Develop and share energy efficiency guidelines for standard City operating procedures (e.g. turning off computers and monitors, phantom load, etc…)

a. Research and develop energy efficiency office guidelines and procedures for all City staff.

b. Publicize energy efficiency guidelines within the community, highlighting parallels in the home and in the office for the benefit of the residential and commercial sectors.

1.2.4 Provide and promote educational opportunities for building operations and maintenance staff.

Operations and maintenance staff should be well-versed in energy efficiency techniques and emerging technologies as the first line of defense in our larger buildings, both public and private, crosscutting all sectors. The most energy efficient, conscientious tenant or office occupant is only as efficient as his building O&M staff that generally has control of the major systems in the building, including but not limited to heating and cooling.

Building Operations Maintenance certification class conducted by MEEA, the Midwest Energy Efficiency Alliance.

a. Provide opportunities for energy efficiency training on building energy systems and controls, emerging technologies, etc… for operations and maintenance staff of office, municipal/governmental, industrial and large multi family buildings.

b. Encourage ongoing roundtable discussions among operations and maintenance peer groups to discuss lessons learned and best practices in the community.

STRATEGY 3: IMPROVE ENERGY USE THROUGH IMPLEMENTATION OF NEW TECHNOLOGIES.

Energy efficiency is not solely achieved through consumer behavior change, although that's a large part of it. Technological advances also aid in the efficient use of energy, as evidenced by the popular EnergyStar branding of consumer products and the increase in gadgets and tools on the market that are designed to help everyone from the homeowner to the factory operator use energy more efficiently.

1.3.1 Develop and share an energy efficiency guidelines for procurement (e.g. for purchase of office equipment.

a. Research and develop energy efficiency/sustainability procurement policies for the purchase of office equipment and other sustainable purchases (recycled paper, etc).

b. Publicize procurement policies within the business community for replication.

1.3.2 Engage in ongoing smart grid technology discussions and remain involved.

a. Determine whether or not there are new smart meter/smart grid pilot programs that Decatur can tap into with Ameren.

b. Determine how Decatur can take advantage of existing smart meters that are currently being tested in the Ameren territory.

c. Get involved with the ongoing policy discussions surrounding smart grid technology and educate the public along the way.

GOAL 2: *DECATUR WILL INVESTIGATE AND UTILIZE RENEWABLE ENERGY OPPORTUNITIES, WHEN AVAILABLE AND COST EFFECTIVE, TO REDUCE THE CONSUMPTION OF FOSSIL FUELS*

Centralized power stations, at their inception more than one hundred years ago, provided the most efficient method for the creation and distribution of electricity. But as more fuel options and improved technologies have come to market in recent years, both large scale renewable energy generation and small scale, on-site "distributed generation" (DG) have become a viable option. Renewable energy generation is attractive for many reasons including environmental impact, ability to address supply problems (e.g., power quality and

Richland Community College windmill.

availability), and in the case of on-site generation, energy security (e.g., eliminate potential for centralized electricity failure).

On-site (small scale) renewable energy

On-site generation of electricity allows households to decrease or even eliminate the amount of electricity purchased from the electricity grid. Appropriate household systems include photovoltaic (PV) panels or wind turbines that can be installed on roofs or in yards. Participating households would likely interconnect home DG systems to the electric grid in order to sell excess power, as well as purchase power when home systems do not provide sufficient capacity.

The major barrier to distributed generation is its high initial investment costs. The cost of installing renewable electricity systems vary from $15,000 up to $50,000, with lengthy payback periods if no subsidies are involved. The State of Illinois offers rebates for alternative energy system installation, providing up to 30 percent of the installation cost.[2] The demand for these funds consistently exceeds available financing, which has resulted in only a small number of installations. While PV systems provide "free electricity," this avoided cost is very small compared to the cost of retrofitting a home for a new PV system. However, building-integrated PV systems at the time of construction are found to be much more cost-effective than retrofitted systems, and have a payback period of only 1 to 4 years.[3] Solar hot water systems are also much less expensive. Overall, there are no known households in Decatur that utilize renewable generation. To make this viable for even middle or upper income households, significant financial assistance for startup costs will likely be required.

Large Scale renewable energy

Photovoltaic (PV) technology and wind power are two proven alternative clean energy sources for utility-scale production of electricity. Using renewable generation sources instead of fossil fuel will result in greenhouse gas (GHG) savings and many other benefits that include reducing air pollutants that damage public health and, importantly, increasing opportunities for innovation and new job creation. Bioenergy also has potential for electricity production, but due to its experimental nature, it will be more expensive to implement and connect to the larger grid at this time—expense being the largest barrier to implementation of renewable electricity generation.

Twin Farms wind farm near Bloomington.

Wind. Illinois has substantial wind energy resources, with the best winds in central Illinois[4]. There are several nearby proposed wind farms, and one turbine that produces a small amount of energy at Richland Community College. Wind is a currently underutilized resource with capacity

[2] Illinois Department of Commerce and Economic Opportunity, http://www.commerce.state.il.us/dceo/Bureaus/Energy_Recycling/Energy/Clean+Energy.
[3] P. Eiffert, National Renewable Energy Laboratory, "Guidelines for the Economic Evaluation of Building-Integrated Photovoltaic Power Systems," Golden, Colorado: January 2003
[4] Illinois Wind Energy Association.

to expand. Ameren is required by law to have 25% of its electricity production be from renewable sources by the year 2025, with 75% of that coming from wind.

Photovoltaic (PV)/Solar. PV technology is being deployed on a utility-size scale in numerous locales world-wide and in the U.S. The plants consist of multiple interconnected PV arrays. The U.S. Department of Energy (DOE) notes that, while the up-front costs of PV systems are higher than both traditional and other alternative energy production operations, they provide do unique benefits. PV arrays can be brought into production much more quickly than conventional plants and, due to their quiet, non-polluting operations, do not face siting objections as other plants do. Within that same renewable energy requirement for Ameren, it outlines a faster implementation deadline for solar energy, with 6% of all electricity coming from solar resources by 2015.

Biomass. Switchgrass is a perennial, native plant to Illinois prairies that can be liquefied, gasified, or burned to produce energy. The Agricultural Watershed Institute's Local Bioenergy Initiative was formed to "ensure that Decatur-area farmers, businesses, and communities are in the forefront of this important segment," citing a critical component that "using plant materials has the additional benefit of providing a new crop for farmers to produce, with the potential for rural Illinois economic development."[5]

Changing the fuel sources for electricity generation has the potential to significantly reduce emissions, create job opportunities, and support the growth in green energy technology manufacturing. Decatur should remain involved in the ongoing policy discussions and issues surrounding renewable energy by supporting legislative policy and funding of projects that make sense for the environment and economy. Further, the City should position itself and the surrounding area for consideration in the siting of both large and small scale renewable energy projects as Ameren expands its renewable energy portfolio in the coming years.

STRATEGY 1: UNDERSTAND EXISTING RENEWABLE ENERGY OPPORTUNITIES AND CONSTRAINTS.

The City should research renewable energy topics and remain informed on the local, state and regional happenings as utilities strive to meet their requirements as prescribed in the Illinois Renewable Energy Portfolio Standard, as well as other nearby states. Decatur may be well positioned for both on-site and large scale renewable energy projects, given its current mix of land use (major industry, sturdy housing stock surrounded by rural areas.)

Projects/Actions

2.1.1 Review current city codes and polices to ensure it supports renewable energy and doesn't hinder it.

a. Review the zoning ordinance, building code and property maintenance-related codes in particular for elements that would prohibit small scale renewable energy unintentionally.

b. Research and consider on-site renewable policies for wind and solar.

[5] Agricultural Watershed Institute *"The Local Bioenergy Initiative: Enhancing the Triple Bottom Line of Agriculture."* December 2008.

2.1.2 Develop an information clearinghouse for renewable energy at the household/small business level.

Provide information for consumers interested in on-site renewable energy, including how to connect to the larger electrical grid.

2.1.3 Remain informed and updated regarding Ameren's renewable energy portfolio requirements and progress.

Review progress reports submitted to the Illinois Commerce Commission and other entities.

STRATEGY 2: IDENTIFY FINANCING AND POTENTIAL SITES FOR LARGE AND SMALL SCALE RENEWABLE ENERGY PROJECTS.

As the City inserts itself into the local and regional conversations regarding renewable energy, it should pay close attention to pilot projects and "live" projects that are being discussed by Ameren. Decatur should pay close attention to the checklist of site qualifications to determine where Decatur and its surroundings might be a good fit. It should be noted that these same qualifications can also be marketed to private developers and other utilities, as electricity generation can, and is often supplied from hundreds of miles away.

Project/Action

2.2.1 Review and leverage potential program funding for project sites from utilities, government and private developers.

Given Ameren's renewable energy requirements for 2025, Decatur should aggressively position itself for any pilot demonstration projects for on-site renewables, especially in the residential and industrial sectors.

2.2.2 Identify opportunities at individual and large scale level projects

Once ideal site qualifications are understood, Decatur should consider, at a minimum, highlighting local sites that meet those qualifications by mapping them and providing packaged information (including ideal sites, receptive community as evidenced by the Sustainability Plan, etc)

a. Given Ameren's renewable energy requirements for 2025, Decatur should aggressively position itself for any pilot demonstration projects for on-site renewables, especially in residential and industrial sectors.

b. Given Decatur's urbanized area surrounding ample rural land, Decatur should aggressively position itself for wind farm projects, private or utility-based specific to Ameren or regionally, for ComEd.

STRATEGY 3: CREATE A MARKET FOR PERENNIAL GRASSES FOR BIOENERGY USE

2.3.1 Recruit farmers to produce perennial grasses for bioenergy.

Outreach will include workshops, field days, fact sheets, web sites and other educational activities for prospective growers. AWI coordinated an energy grass education area at the 2009 Farm Progress Show and will repeat and update the successful exhibit at the next show in Decatur in 2011. Local partners are seeking financial and in-kind support for establishing energy grasses. AWI will work with the Macon County Soil and Water Conservation District to implement the Big and Long Creek subwatershed project, which includes harvestable filter strips designed to protect Lake Decatur.

2.3.2 Create industries to purchase perennial grasses for bioenergy use.

Markets for fuel made from energy grasses include home or commercial heating systems and industrial or utility boilers. AWI will work with businesses, entrepreneurs, and investors to assess options and conduct tests and demonstration projects on the most suitable options. AWI will work with appropriate agencies to identify and pursue biomass-related economic development opportunities such as local manufacturing of equipment to make and use grass fuel. AWI will also determine the viability of "green payment" mechanisms for greenhouse gas reduction, water quality, and other conservation benefits.

2.3.3 Begin test projects of growing perennial bioenergy crops that utilize less water and fertilizer and test the impacts on water quality.

Decatur can build a market for production of bioenergy while reducing overall water quality impacts on the Sangamon River watershed and increasing the value of agriculture property over time. Starting with 40 acres in 2010 with 40 tons harvested, the goal is to move up to 11,000 acres over the next ten years, producing 68,000 tons of grasses harvested.

Demonstration Projects during 2009 Farm Progress Show in Decatur
Courtesy: AWI

GOAL 3: *DECATUR WILL REDUCE TOTAL AND AVERAGE HOUSEHOLD VEHICLE MILES TRAVELED*

STRATEGY 1: IMPROVE FLEET EFFICIENCY.

As a lead in sustainability, the City should examine its second largest contributor to emissions—transportation. Taking account of its vehicle usage and instituting policies makes good environmental and economical sense. The City can take this opportunity to lead by example, while improving the environment and saving taxpayers money.

Improving fleet efficiency includes examining types of fuels used, the mix of vehicles within the fleet, and other practices (such as an anti-idling policy) to maximize efficiency whenever and wherever possible. As shown by Eagle County, Colorado, Decatur could benefit immensely with a comprehensive approach to fleet management.

Eagle County, Colorado
Cutting Fleet Costs & Fuel Consumption

Eagle County conducted a "utilization study" of its fleet in order to examine a monthly account of miles driven, fuel costs, repairs and maintenance. There are software programs for this, but smaller fleets can design a simple spreadsheet. Using the study as a basis for decision-making, the county reduced costs and consumption in the following ways:

- Targeting departments with low-use vehicles for sharing of cars
- Using right vehicle for the job (hybrid cars when possible, vans versus trucks)
- Employs "check out system" for trucks, SUVs that aren't always needed
- Requires proof from departments requesting pickup truck purchase
- Aggressive fleet maintenance

Source: http://garfieldcleanenergy.org/trans-fleets-Eagle.html

Projects/Actions

3.1.1 Institute fleet purchasing requirements.

a. The City should institute policies for flex fuels/biofuels, hybrids, size requirements (compact vs. SUV), and general efficiency factors for the purchasing of all City vehicles.

b. The City should consider a comprehensive fleet management program to assess vehicle needs and pinpoint issues over time.

STRATEGY 2: IMPROVE WALKABILITY.

If Decatur aims to get people out of single occupancy vehicles, people need to be able to use sidewalks to arrive at their intended destinations. Major commercial hubs and transit stations/stops need pedestrian-friendly intersections and connections that make sense at the "human scale." Established neighborhoods that do not have sidewalks should be enhanced with sidewalks that are integrated into the existing system of sidewalks. At the time of construction, new residential neighborhoods should be connected to nearby destinations not just by road, but by a network of safe sidewalks that are protected with amenities including curbs, trees and other traffic calming devices that encourage drivers to be mindful of pedestrians and other modes of travel. These same safety enhancements and amenities should be afforded to the established neighborhoods whenever possible.

Projects/Actions

3.2.1 Work with neighborhood organizations to install sidewalks within residential areas that do not currently have sidewalks.

Identify where there are not sidewalks and develop a timeline/schedule for installation of sidewalks.

3.2.2 Require sidewalks (using a connectivity index) along all newly constructed residential and commercial buildings.

Sidewalks are required in all new construction projects, however a connectivity index will provide an added sustainability measurement for the benefit of the City and its residents, business owners and other stakeholders.

Pedestrian safety enhancements include on-street parking (acts as buffer, and slows cars down) and street lighting (buffer). Amenities include the decorative lighting and street plantings.

STRATEGY 3: PROMOTE INCREASED TRANSIT USAGE.

The Decatur Public Transit System (DPTS) provides 15 bus lines that operate on a "pulse" system every 30 minutes originating from the downtown area. Providing non-personal automobile means of transportation is especially important to individuals and families on fixed incomes, the elderly, youth, and this disabled. Bus ridership may begin to include other groups of people if transportation choices are expanded to include additional routes, extended hours and interconnected extensions like bicycling routes, car-sharing, and pedestrian-friendly destination points. But how does the transit system expand with its current ridership? The "chicken and the egg" analogy is a good fit for this discussion, which comes first, more people willing to ride busses, then extended hours and additional routes? Or will the additional riders come once the routes are deemed more convenient? The strategy discussions to promote increased transit usage must occur within the context of other complementary strategies, and the changes must be incremental so the careful balance of new options and increasing ridership does not adversely affect DPTS or riders.

Project/Action

3.3.1 Seek solutions for providing transportation to outlying areas.

Continue the discussion to determine best ways to expand transit to outlying residential and commercial areas.

3.3.2 Develop an educational campaign on the benefits of using transit and other modes of transportation.

Develop a "promote transit" campaign in conjunction with other transportation programs, such as carpooling, car sharing and bicycling. At first, consider targeting particular audiences (e.g. student population.)

STRATEGY 4: INVESTIGATE CAR-SHARING AS A TRANSPORTATION ALTERNATIVE.

I-Go car sharing advertisement, Chicago, IL

Car sharing is a type of car rental that allows participants to rent cars for short periods of time (e.g. a few hours) to conduct everyday business like grocery shopping, going across town to visit a friend or a night on the town. It allows the freedom of having a car, but without the hassles of car ownership, including car notes, insurance, rising gas prices and other fees. Car sharing is ideal for households with limited budgets such as college students or senior citizens, and concerned citizens with an interest in reducing their carbon footprint. Successful car sharing programs are integrated with, and thus promote, public transit, bicycling routes, and walking.

Project/Action

3.4.1 Investigate car-sharing as an alternative method of transportation that allows participants the freedom of having a car without the burdens of ownership.

Research car-sharing programs in other cities and consider their applicability in Decatur. In a pilot or test run, consider targeting "limited income" sectors of our population that will benefit from have a car, but not necessarily the fees associated with it.

STRATEGY 5: IMPROVE BICYCLING.

Improving bicycling and promoting it as a viable alternative for transportation in and around Decatur will aid in the enhancement of other alternative methods of transportation, including transit, carpooling car sharing, and walking. This is much different from years past when transportation planners were planning with only the motor vehicle in mind. In the early 1990s, federal legislation required that any transportation project receiving federal funds (most of them!) must promote "intermodalism" and for the first time, funded non-road projects including bike paths and sidewalks.

In the introductory purpose section of the *US Department of Transportation Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure* , it notes that "the additional 'burden' of having to find space for pedestrians and bicyclists was rejected as impossible in many communities because of space and funding constraints and a perceived lack of demand. There was also anxiety about

encouraging an activity that many felt to be dangerous and fraught with liability issues. Designers continued to design from the centerline out and often simply ran out of space before bike lanes, paved shoulders, sidewalks and other 'amenities' could be included."[6]

It was for these reasons that the US Department of Transportation opted to develop the policy statement on the integration of bicycling and walking, providing key design and policy measures, taking much of the "legwork" of research and testing of what works and doesn't out of the equation. "Every transportation agency has the responsibility and the opportunity to make a difference to the bicycle-friendliness and walkability of our communities. The design information to accommodate bicyclists and pedestrians is available, as is the funding. The United States Department of Transportation is committed to doing all it can to improve conditions for bicycling and walking and to make them safer ways to travel."[7]

The policy statement goes on to read that this integration of multi-modal transportation is a long-term transportation planning issue and should be treated as such in all comprehensive transportation planning efforts. The statement concludes with the suggestions that all transportation agencies:

- Adopt the policy statement and any new/amended design guidelines and manuals as they come forth; and
- "Initiate an intensive re-tooling and re-education of transportation planners and engineers to make them conversant with the new information required to accommodate bicyclists and pedestrians. Training should be made available for, if not required of, agency traffic engineers and consultants who perform work in this field."[8]

Projects/Actions

3.5.1 Increase on-street safety enhancements

Review, understand and implement US DOT Federal highway Administration's "Design Guidance Accommodating Bicycle and Pedestrian Travel: A Recommended Approach" into long term transportation planning efforts in Decatur, while encouraging surrounding areas to do the same.

3.5.2 Install secure bicycle racks/parking at public transit locations and in commercial hubs

Install simple bike racks for ease of bike parking in high traffic areas.

3.5.3 Create "sharing the road" bicycle awareness program

Develop community awareness program at onset of implementation of new enhancements that highlights City policy to share the road among pedestrians, cyclists and drivers.

3.5.4 Create bike/transit program

[6] US Department of Transportation. "Design Guidance Accommodating Bicycle and Pedestrian Travel: A Recommended Approach." http://www.fhwa.dot.gov/environment/bikeped/design.htm#d3
[7] Ibid
[8] Ibid

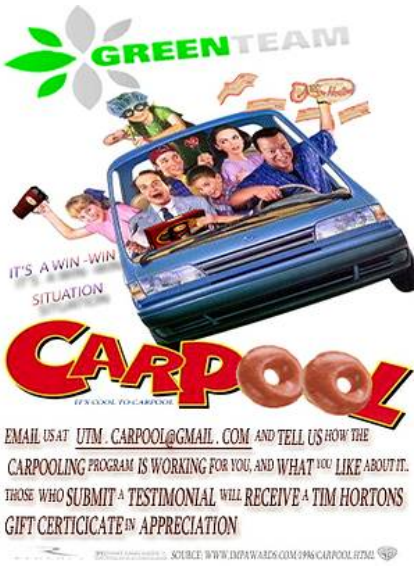
Develop program that makes it easy to take your bike along on transit rides (essentially extending all transit trips by the cyclists' choice.)

STRATEGY 6: ENCOURAGE CARPOOLING.

A carpool consists of at least two commuters who share a ride to and from work or regional destination points using their personal vehicles. Generally, there are two types of carpools: Sharing the riding and driving/riding only, where one person always drives and the other always rides. In both kinds, the cost of carpooling is distributed fairly among the drivers/riders.

Given the amount of Decatur residents who travel daily to the regional employment centers of Champaign-Urbana and Springfield, the City could initiate and publicize a carpooling program that touts the benefits of carpooling which include the following:

- Reduce costs through shared commuting costs;
- Reduce commuting stress while reducing traffic; and
- Reduce air pollution/emissions.



Carpool benefits and incentives in Toronto, Canada.

Common approaches to carpooling include an online ride "finders" program and incentives such as offering guaranteed rides home in the event of an emergency, preferred or free parking, prizes, etc…

Project/Action

3.6.1 Create regional carpooling program for major employment centers in the region.

Create a regional carpooling program to engage those who drive daily to Champaign-Urbana and Springfield. Utilize highly accessible and visible starting points such as the Convention Center or the mall.