

VILLAGE OF HOWARD, WISCONSIN

# Energy Action Plan 2009

The 2020 Plan



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**As established and recommended by:**



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**Please Note:**

2006 is used for the baseline of all energy targets.  
 The Carbon Footprint Report, 25x25 Resolution and other energy policy documents can be found on the Village of Howard 's GGSG website:  
[www.villageofhoward.com/go-green\\_save-green.cfm](http://www.villageofhoward.com/go-green_save-green.cfm)

**Key Players in Energy Action Plan Implementation**



**Village of Howard—**  
 The Village Board, Go Green Save Green Task Force, and Village employees must use their position to remove obstacles in policy and implementation to allow for green innovation.

**Local/Regional Businesses—**  
 Collaboration with local businesses allows practical perspective and expertise in green areas. The Small Biz Partnership will be a key link between the Village and Howard businesses.



**State and Federal Govt—**  
 Grant monies are often the key catalyst for sustainable development and project implementation



**Howard Residents—**  
 It requires the involvement and support of the entire Howard community to make the goals of Howard's Energy Action Plan a reality.

**BUSINESS NAME**

## The Village of Howard/Go Green Save Green Task Force Goals:

### Short Term:

- Compile and update data on the sources, uses and costs of energy and natural resources in the Village of Howard.
- Continue to calculate carbon footprint annually of governmental operations.
- Begin calculation of community-wide carbon footprint.
- Implement local programs to reduce the use of non-renewable energy sources to help meet the Governor's 25x25 pledge.
- Actively solicit funding for energy efficiency projects to leverage village dollars and efforts.
- Provide energy education materials to Village employees to encourage energy efficiency at work and home.
- Promote the use and design of energy efficient street lighting systems, and continue to convert street lights to be more energy efficient.
- Promote the use of life-cycle costing in purchasing decisions made by the Village.
- Promote voluntary recycling of major glass, metal and wood products at construction and demolition sites.

### Long Term:

- Work with other governments in the region to promote environmental practices and joint-purchasing whenever applicable.
- Promote density, location, and mix of land uses that decrease the length of required daily trips and encourage the consolidation of related trips. (Walkable Village Center)
- Provide information to developers, architects, builders, and others interested in improving energy efficiency in new construction.

## Executive Summary

### Introduction

The Village of Howard's Go Green Save Green Taskforce has been assigned the responsibility of offering recommendations to the Village Board regarding energy and cost saving strategies for sustainable and financial purposes. The 2009 Energy Action Plan created by the Go Green Save Green (GGSG) Taskforce is meant to provide current readings and future targets of Village energy sources and costs. The Action Plan serves as a guide to the Village's obstacles and opportunities to be more environmentally friendly and cost efficient.



### Plan Development

This Energy Action Plan was developed by the GGSG Taskforce staff liaison Jennifer Pollitt using the UW-Extension's Municipal Energy Planning Workbook. Action plans from around the country were used and referenced throughout the creation of Howard's plan. The 2009 Energy Action Plan is the first plan of its kind for the Village of Howard. It will continue to be developed and utilized as a policy tool for Village facility, transportation, and energy-based decision-making.

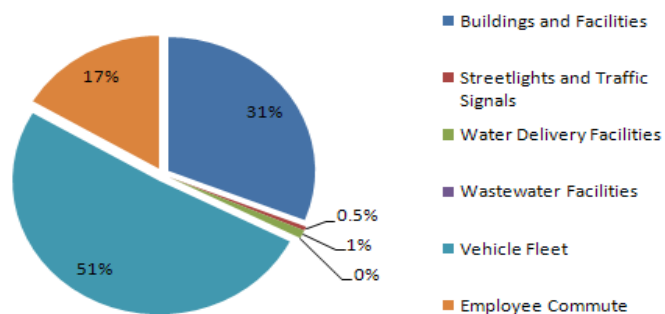
### Steps for Sustainability

The Village of Howard through its Go Green Save Green Taskforce, staff and Village Board of Trustees has taken great strides in promoting sustainable practices. This document will highlight initiatives of the past, present and future that will reduce carbon emissions, lower costs, and enhance the quality of life for the employees and community members of the Village of Howard. To demonstrate its commitment to sustainability, the Village Board of Trustees passed a 25x25 resolution thereby signing onto Governor Doyle's renewable energy sources initiative. The 25x25 plan states that the Village will look to convert 25% of its energy use to renewable sources by the year 2025. To better track this initiative and to have access to available resources, the Village registered with the state Office of Energy Independence to register as an Energy Independent Community. Other resources, including carbon footprint calculation software, were made available when the Village of Howard joined the International Council for Local Environmental Initiatives (ICLEI). ICLEI-Local Governments for Sustainability is an international network of municipalities committed to sustainability and environmental awareness. In October 2009, the Village of Howard completed its first greenhouse gas emissions inventory for its governmental operations. The results are listed on the following page.

Carbon Footprint Summary

In October 2009, the Village completed its first greenhouse gas emissions inventory using ICLEI’s Clean Air Climate Protection (CACCP) software. 2006, 2007, and 2008 year inventories were conducted. In 2006, over 7 million pounds of carbon dioxide equivalents were emitted costing the Village \$669,646. 2007 emissions totaled significantly less at nearly 2.1 million pounds with costs at \$647,023.

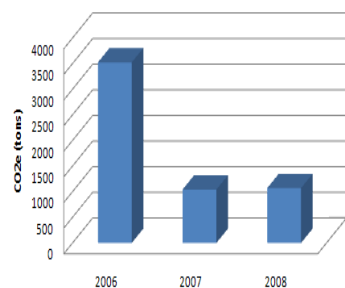
2007 Emissions by Sector



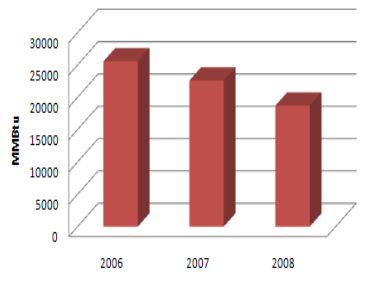
The sector breakdown below shows the main contributors to the Village of Howard’s government operations greenhouse gas emissions in 2007.

The Village is happy to report its reduction in emissions and energy usage since 2006. Costs have stayed consistent around \$670,000.

Carbon Emissions- Time Series



Energy Usage- Time Series



Other Energy Initiatives, continued



Green Construction

**2006 # LEED Certified Buildings: 1**

**Goal: Remove obstacles preventing green construction.**

**Target: Have five LEED certified buildings constructed in Howard by 2020.**

Recent Initiatives:

-Created green construction section to Building Permit application

Pending Initiatives:

-Creating green building recognition program

-Looking into incentives for green construction /LEED certification

Future Initiatives:

-Develop marketing program



Community Involvement

**Goal: Work together for a green Village.**

**Target: Utilize passions and expertise of community members to help create a sustainable community.**

Recent Initiatives:

-Established Go Green Save Green Taskforce with citizen members

-Appointed staff member to Greater Green Bay Sustainability Task Force

Pending Initiatives:

-Create and distribute Green Practices brochures and marketing materials

-Promoting rain gardens and bio-retention ponds for stormwater management

Future Initiatives:

-Create a Community Garden

-Sell Rainwater Collection Barrels

-Conduct Community Greenhouse Gas Emissions Inventory

**Other Energy Initiatives**



**Recycling**

**2006 Tonnage: 2,601,480 pounds of recycling**  
**Goal: Promote recycling to increase recycling revenue and decrease tipping fees.**  
**Target: Increase recycling tonnage eligible for sale by 25% by 2020.**

**Recent Initiatives:**

- Distributed 90 gallon recycling carts to Village homeowners
- Began Single Stream recycling program in summer 2009

**Pending Initiatives:**

- Working with School District on vegetable waste compost option

**Future Initiatives:**

- Explore residential and municipal composting options



**Forestry /Parks**

**2007 Park Acreage per 1000 Population: 56.2**  
**Target: Maintain our current per capita tree planting amounts, green space dedication, and park and forest development.**

**Recent Initiatives:**

- Planted 13 acres of prairie plant life
- Complied with DNR standards using slow release fertilizers
- Reviewed and updated the Village's Urban Forest Management Plan

**Pending Initiatives:**

- Continue native plantings as new roundabouts are constructed

**Future Initiatives:**

- Upgrade current park trails and install new trails
- Move toward using environmentally friendly janitorial products in park maintenance operations
- Continue installation of recycling containers in parks

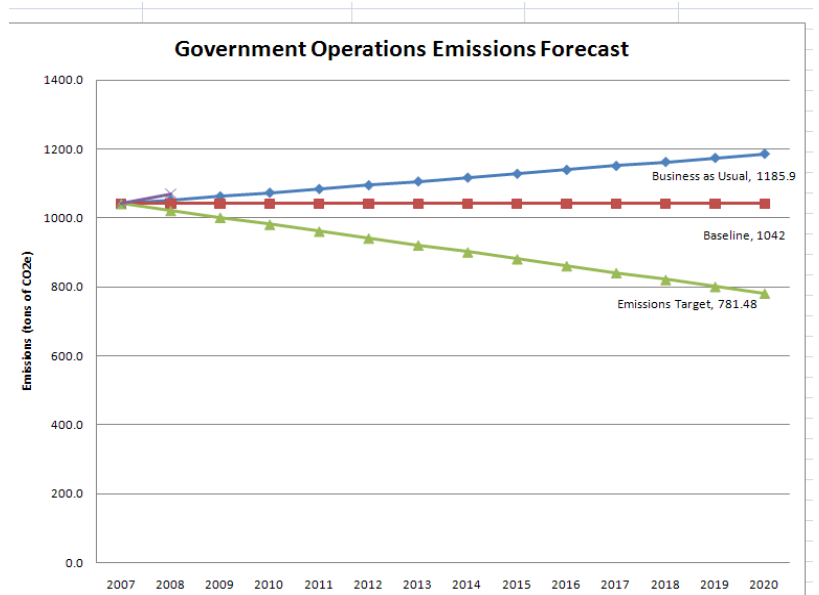
**Carbon Footprint Targets**

When determining an emission reduction target, it was decided to change the baseline year from 2006 to 2007. This is because the Central Brown County Water Authority's decision to contract with Manitowoc Public Utilities caused such a dramatic reduction in emissions. 2007 data more accurately represented the new "normal" standard for usage and costs. The goal set by the Go Green Save Green Taskforce is to:

**"Reduce Emissions by 25% by 2020."**

This plan is set to correspond with the 25x25 renewable energy plan the Village Board adopted in June of 2009. The Village hopes to reduce its energy usage and reliance on non-renewable sources significantly in the next 13 years (using 2007 as the new baseline).

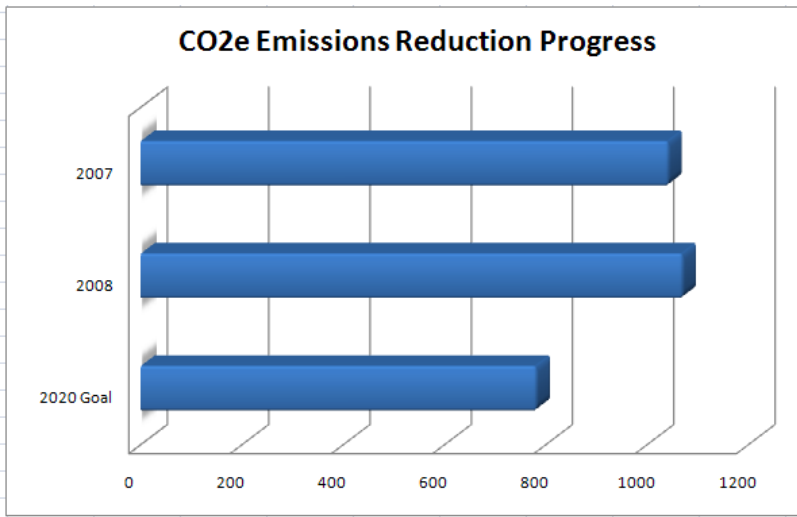
When forecasting future emissions, it is common practice to assume a 1% increase in emissions per year for governmental operations. Business as usual, as seen below, is therefore projected to emit 1185.9 tons of carbon dioxide equivalents in 2020. With a 25% reduction goal, 2020 emissions hope to be only 781.48 tons. The purple line on the graph below shows 2008 emissions. This line will be updated as inventory years are completed.



Goal Progress

To achieve a 25% reduction in carbon dioxide equivalent emissions, the Village must eliminate 404.4 tons of emissions from its operations. The Go Green Save Green Taskforce has the responsibility of tracking the Village of Howard's progress:

As of 2008, the Village of Howard has achieved **-7%** of its 25% by 2020 goal. This is to say that government operations emissions in 2008 were 7% more than in 2007. The Village now has 107% to go to achieve its goal. Instead of 404.4 tons, the Village now must reduce emissions by 432.4 tons. The Village of Howard has achieved **0%** of its 25x25 commitment. (The resolution was signed in 2009. Planning began at that time.)



On the following pages, the Go Green Save Green Taskforce has highlighted initiatives of the past, present, and future to help continue reducing Village government operations emissions by 2020. Initiatives have been grouped by CACP sectors as well as other key areas where reductions are possible.

Sector Analysis, continued

Vehicle Fleet

**2006 Fleet Costs: \$133,299**

**2006 Energy Usage: 6,045 MMBtu**

**Usage: 21,757 gallons of unleaded fuel & 24,099 gallons of diesel.**

**2006 CO2e emissions: 484 tons**

Recent Initiatives:

**-Coordinated with local E-85 provider to find measuring/tracking system to evaluate fuel efficiency.**

Pending Initiatives:

**-One year pilot program: 2 flex fuel vehicles (1 using E-85, 1 using Unleaded)**

Future Initiatives:

**-Look into Smart Car, hybrid, E-85, and/or electric car purchases when fleet replacement is necessary.**

**-Look into hydrogen fuel cells for large fleet vehicles.**

Employee Commute

**2006 Costs: \$0 to the Village**

**2006 Energy Usage: 2,153 MMBtu**

**2006 CO2e emissions: 172 tons**

Recent Initiatives:

**N/A**

Pending initiatives:

**-Residency Requirement for Village Administrator**

Future Initiatives:

**-Survey staff for willingness/availability to carpool**

**-Proposed RTA may provide bus service**

## Sector Analysis, continued

**Water Delivery Facilities**

2006 Fleet Costs: \$151,404  
2006 Energy Usage: 8,155 MMBtu  
2006 CO2e emissions: 1,818 tons

**Recent Initiatives:**

-Contracted with Manitowoc Public Utilities for water delivery

**Pending Initiatives:**

-Inspect listening device for leakage in water system.  
 -Working with Central Brown County Water Authority to reduce energy costs by changing pump hours to off peak schedule

**Future Initiatives:**

-Inspecting, replacing and relocating water lines in anticipation of new major roadway construction.

**Wastewater Facilities**

2006 Costs: \$3,097  
2006 Energy Usage: 77 MMBtu  
2006 CO2e emissions: 17 tons

**Recent Initiatives:**

N/A

**Pending Initiatives:**

-Inspect 4 miles per year for infiltration  
 -Replace old sewers as old neighborhoods are reconstructed and redeveloped.

**Future Initiatives:**

-Inspecting, replacing and relocating sewer lines before new major roadway construction.

## Sector Analysis

**Buildings and Facilities**

2006 Costs: \$119,190  
2006 Energy Usage: 8,439 MMBtu  
2006 CO2e emissions: 898 tons

**Recent Initiatives:**

-Installed motion lighting in Village buildings  
 -Scheduled routine monitoring of facility temperatures and energy usage  
 -Installed programmable thermostats  
 -Recaulked doors and windows at Fire Department

**Pending Initiatives:**

-Applying for Energy Efficiency and Conservation Block Grant to replace boilers with two 92% efficient boilers

**Future Initiatives:**

-Install Motion lighting at all park facilities  
 -Renovate Golf Course clubhouse

**Streetlights & Traffic Signals**

2006 Costs: \$262,656  
2006 Energy Usage: 680 MMBtu  
2006 CO2e emissions: 136 tons

**Recent Initiatives:**

N/A

**Pending Initiatives:**

-Purchasing three LED streetlights as pilot program

**Future Initiatives:**

-9 intersection traffic signals will be replaced by roundabouts during Highway 41 reconstruction project