

# Windsor Heights Going Green

## Creating a sustainable Community

- Government Plan
- Residential Plan
- Commercial Plan



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# Government Plan

Ideas to implement  
within 1 year





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# Government Plan 1 year

- **Create green purchasing policy**
  - **Replace all out-of-date appliances with Energy Star appliances**
  - **Require energy efficient computer and appliances be bought.**
- **Purchase energy efficient space heaters for offices as required.**
- **Program printers to always print duplex to save paper**
- **Install high pressure air hand dryers in restrooms**



# Government Plan 1 Year

- Lighting
  - Install all new, highly energy efficient light bulbs for all buildings.
  - Replace all light switches with well designed motion detectors



Sam A Marshall

# Government Plan 1 Year



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- Program and “lock” city thermostats so they are coordinated with each other and cannot be changed
- Put recycling containers at each desk.



# Government Plan 5 years

- Purchase hybrid vehicles
  - Develop ways to reduce idling vehicles
- Mandate use of E10 in all city vehicles
- Replace fire bay doors with insulated doors
- Require all new or renovated city buildings be LEED certified and retrofitted with “green” roofs
  - Install closed loop geo-thermal heating systems for all city buildings.
- Purchase wind power for all city electricity



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# Hybrid Cars

- Westwood, New Jersey
  - Crown Vic Averaged 6 mpg
  - Ford Escape Hybrid averaged 20 mpg
  - “With the hybrid, Westwood immediately saved 14 gallons of fuel per 12-hour shift. At \$2.40 per gallon, that equates to \$33.60 per shift, \$67.20 per day, \$403.20 per week and \$20,996.50 per year!”
  - [http://www.njslom.org/magart\\_0208\\_pg70.html](http://www.njslom.org/magart_0208_pg70.html)



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# Government Plan 5 years

- Plant large trees around all city building in order to shade them
- Plant trees along all city roads in order to shade roads and sidewalks
- Create area of Community Garden on public land



# Government Plan 5 years



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- Develop long range plan for removing all water infiltration into the sanitary sewer system.
- Create pilot program locations for permeable paved parking lots and roads
- Replace streetlights and stop lights with most energy efficient outdoor lighting
- Install solar tubes for lighting in buildings



# Permeable Pavers-Chicago's Green Alley's Program



- Permeable paved alley's
  - Stormwater Management
    - Filters Water into the ground
    - Reduce flooding
  - Heat reduction
    - Light colored materials, air passage



# Government 10 year plan



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- Adopt International Energy Conservation Code
- Support Smart Grid Technology
- Use “grey” water for irrigation systems
- Replace all city parking lots with permeable pavers
- Replace fire bay heaters with infrared radiant heaters
- Install solar panels on city buildings for water heating and electricity



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# Government 10 year plan

- E85 or Biodiesel Vehicles—As infrastructure allows.
- Meter city hall departments to track utility use
- Create small lot sized parks in 3 new locations in order to encourage outdoor play.

# Government 20 year plan

- Assuming permeable pavers hold up and are function well, install permeable roads.





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# RESIDENTIAL PLAN



# Residential Plan 1 year plan



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- Education through newsletter and Windsor Heights Living magazine
  - Stormwater best practices
    - Rain gardens, bio swales, etc
  - Mid American Energy and federal tax incentives for energy efficient appliances and remodels.

## Let's "Green" Windsor Heights Together

**A**s a homeowner living in Windsor Heights and a MidAmerican Energy customer, their EnergyAdvantage® programs can help you better manage your energy expenditures and keep your home more comfortable.

### Residential HomeCheck® Program

The HomeCheck program provides heating energy customers with homes built before December 31, 1990, with an on-site home audit, as well as free installation of low-cost energy efficiency measures. Call 800-545-0762 for a HomeCheck audit, or visit [www.midamericanenergy.com/homeaudit](http://www.midamericanenergy.com/homeaudit) to complete an audit online.

### Residential Equipment Program

Residential customers can receive rebates or discounted financing through when they replace existing space-conditioning equipment, water heaters and selected appliances with high-efficiency equipment. In addition to saving money with purchasing incentives, MidAmerican customers receive long-range benefits with lower utility bills.

### EnergyAdvantage® Financing Program

For customers interested in increasing the energy efficiency of their homes or businesses, MidAmerican offers special financing in partnership with First American Bank. EnergyAdvantage Financing is designed to provide Iowa customers the opportunity and flexibility they need to make energy-efficient improvements by providing customers access to competitive interest rates when they meet First American's credit qualification requirements and purchase and install qualifying equipment.

### Plant some shade.® Program

MidAmerican partners with the Iowa Department of Natural Resources and local county conservation boards to offer affordable and desirable landscape trees (6-8 feet tall) for Iowa residents to purchase and plant on their property for long-term community reforestation. The cost to residents is \$25 per tree, up to two trees per household may be purchased. For more information, visit [www.midamericanenergy.com/planthomesshade](http://www.midamericanenergy.com/planthomesshade). Good shade and landscaping can also help address stormwater runoff by reducing it and making it cleaner.

### Low-Income

**Weatherization Program**  
This program is available to low-income households in MidAmerican's Iowa service territory. The program is administered through local community action agencies and the Iowa Department of Human Rights. Further information on this program is available through West Des Moines Human Services at 222-3660.

**Federal Tax Credits for Energy Efficiency**  
Homeowners can receive a tax credit for making envelope improvements to and installing energy-efficient heating, cooling, and water heating equipment in their primary residence. The incentive is 30% of the cost of eligible measures, with a \$1,500 cap on the credit per home. The tax credit for envelope improvements is based on the cost of the materials installed (insulation, windows, sealsants, etc.) not the cost of labor. The credit for home heating and cooling and water heating equipment is based on both the cost of the materials and installation labor costs. For more information, please visit [www.energystar.gov](http://www.energystar.gov).



# Residential Plan 5 year plan



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- Create a city matching grant to piggy-back on the Mid American rebate program
- Require any groundwater infiltration into the sanitary sewer from residential homes be disconnected
  - <http://www.cityofindianola.com/departments/I%20and%20I%20program%202009.asp>
- Encourage more dense residential developments in appropriate areas
  - Townhomes and Condos

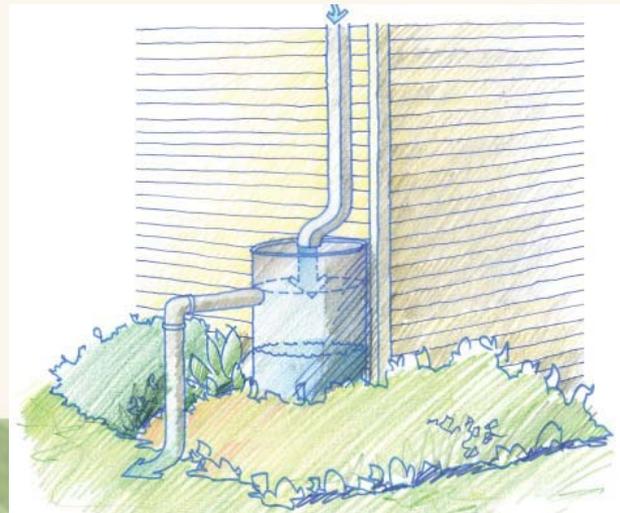


# Residential Plan 10 year plan



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- Adopt International Energy Conservation Code
- Create incentives for homeowners to use permeable pavors in driveways and to create rain gardens or rain barrels
  - Utilize stormwater funds for this program





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# COMMERCIAL PLAN

# Commercial 5 year plan



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- Provide matching grants to businesses with large parking lots to install permeable pavers
- Provide matching grants to businesses to install larger “islands” in parking lots to provide sizable space for the planting of shade trees, rain gardens and bioswales
  - Reduce “heat island” affect
  - Reduce flash flooding



# Commercial 10 year plan

- Adopt International Energy Conservation Code
- Require use of permeable pavers in sections of all large parking lots
- Require all new commercial buildings be LEED certified



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# Additional program



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- Work with Polk County and the state legislature to allow and create a “Climate Smart Loan Program” similar to the program in Boulder County Colorado. The program allows for the county to sell bonds, with the proceeds used to install and purchase insulation, energy efficient windows, doors, wind turbines, solar panels, etc. Then, the property is assessed for 10 or 15 years to repay the bonds that were issued.

<http://www.bouldercounty.org/bocc/cslp/CSLPintro.html>

The logo for the ClimateSmart Loan Program, featuring a blue arc above the text 'ClimateSmart' in green and blue, with 'LOAN PROGRAM' in blue below it.

ClimateSmart  
LOAN PROGRAM



# Issues

- Cost
  - Federal and state grants
  - Some state and federal mandates to fix regardless of costs
- Tracking and monitoring
- Commercial and residential resistance



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# Always a cost of inaction

- Water quality
- Flooding
- Global Warming
- Basement Flooding
- Energy costs continue to increase
  - Mid American Energy Franchise negotiation



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**Windsor Heights can be a leader in the Metro and the state in sustainability**