

MICHIGAN GREEN COMMUNITIES CHALLENGE

ATTACHMENT C

A community should consider the following suggested goals and activities for inclusion in Step 5 of the Challenge:

1. Develop and implement an energy improvement plan for governmental operations.

All local governments engage in planning—which can include land use, transportation, open/public spaces, historic preservation, etc. Increasingly, local governments are recognizing the value in developing plans regarding energy usage. An energy-efficient plan outlines the measures a jurisdiction has and will implement to become more energy efficient and reduce its energy consumption. To determine what types of energy-efficient measures will be implemented, the jurisdiction must first assess the current energy consumption of government-owned and leased facilities. It generally applies to retrofitting existing buildings and sets standards for new governmental facilities to incorporate energy-efficient and sustainable building techniques in their construction.

Implementing energy-efficient and conservation measures into daily operations are essential for reducing energy consumption. An energy improvement plan provides examples of energy-efficient measures that can be applied in areas such as lighting, temperature control, infrastructure, purchasing/procurement, renewable energy, and alternative fuels. Employee awareness should be a fundamental part of the plan. By educating employees about the need for resource conservation and what they can do to make a difference, municipal facilities will become more energy efficient.

Continue tracking energy usage through Energy Star's Portfolio Manager or ICLEI's CACP 2009 software greenhouse gas emissions through a period of three years.

RESOURCES / LINKS:

[Guidelines for Energy Management](#)

[Energy Star's Cash Flow Opportunity Calculator](#)

[DTE Your Energy Savings](#)

2. Adopt a community sustainability plan, climate protection resolution, or similar commitment by the governing body.

By adopting a sustainability plan, or a similar document to organize green initiatives, local governments can coordinate efforts that often cross departmental boundaries, gain input and buy-in from governmental staff and additional stakeholders, and track progress to ensure that goals are met. While each jurisdiction should create a plan that suits its particular situation, the development and adoption of the plan is an important exercise that can benefit communities of any size and lead to demonstrable

results. Credit is also given for adoption of resolutions that are circulating nationally—or their equivalent—to promote responsible actions on climate protection through emissions reductions. While these resolutions are best coupled with plans for specific actions and policies, they represent a public commitment on behalf of the community and can be a positive first step.

RESOURCES / LINKS:

[City of Grand Rapids](#)
[Grand Valley State University](#)
[Michigan Climate Challenge](#)
[Mayors Climate Protection Center](#)
[Intergovernmental Panel on Climate Change](#)
[Michigan Climate Action Council](#)
[The Michigan Climate Action Plan](#)
[ICLEI Five milestones for sustainability](#)

3. Develop recycling and household hazardous waste programs for residents and businesses.

Everyone produces waste. Although most waste can be safely disposed in landfills, much of the solid waste stream contains materials that could be processed into usable commodities. Some common recyclables include metals and corrugated cardboard containers. By providing curbside and drop-off programs, a community is supporting jobs (for every one job created in the waste industry, five jobs are created in the recycling industry) and providing residents and businesses an opportunity to do something positive for their community. Recycling reduces energy use and greenhouse gas emissions in addition to extending landfill life and protecting natural resources from the damage of harvesting, mining, and depletion of non-renewable resources such as oil and metals.

RESOURCES / LINKS:

[City of Ann Arbor](#)
[City of Grand Rapids](#)
[U.S. EPA](#)
[Tools for Local Government Recycling Programs](#)
[Michigan Dept. of Environmental Quality](#)
[WARM - calculator for measuring greenhouse gas \(GHG\) reductions](#)
[Northeast Recycling Council environmental benefits calculator](#)

4. Consider performance contracts.

An energy audit gives a snapshot look at government facility energy use trends, consumption, and potential opportunities to help better manage facilities. Such an audit evaluates energy consumption practices and provides an analysis that can be the foundation for continued business planning, especially in identifying areas for

energy and cost savings within existing facilities.

The use of energy-saving performance contracting is becoming increasingly attractive to local governments. This is when a government or organization contracts with a private firm to assess and correct energy deficiencies—often with little or no actual cost to the locality as the long-term energy savings offset the costs.

RESOURCES / LINKS:

[Rebuild Michigan](#)

[EPA Webinar: Maximize Stimulus Funding with Performance Contracting and ENERGY STAR](#)

[Retired Engineers Technical Assistance Program \(RETAP\)](#)

[Energy Services Coalition](#)

[International Performance Measurement and Verification Protocol](#)

[U.S. Environmental Protection Agency](#)

[Portfolio Manager Factsheet](#)

5. Consider the purchase of electric power from renewable sources or install renewable energy technology (solar, wind, or geothermal) for use in government facilities.

The total of purchased renewable energy and on-site produced renewable energy must equal at least 1% of the energy used of all governmental facilities.

RESOURCES / LINKS:

[Clean, Renewable and Efficient Energy Act \(2008 PA 295\)](#)

6. Develop a policy to utilize energy-efficient and dark sky-compliant outdoor light fixtures.

7. Establish a policy of adherence to LEED certification criteria for all new government facilities.

Resources / Links:

[U.S. Green Building Council](#)

[U.S. Green Building Council -- Detroit Chapter](#)

8. Approve or build a LEED-certified government building or renovate an existing building to LEED-certified level.

Resources / Links:

[U.S. Green Building Council](#)

[U.S. Green Building Council -- Detroit Chapter](#)

9. Implement an internal government program that reduces, reuses and recycles paper, plastic and other materials.

10. Establish a procurement policy of a minimum of 30 percent post-

replacement and the use of alternative fuels (biodiesel, natural gas, ethanol) in fleet operations.

12. Promote light rail systems, increased busing, and other modes of transportation.

13. Develop and implement a plan for tree preservation and planting.

14. Adopt an anti-idling policy for government fleet vehicles.

15. Develop diesel engine retrofits partnership (NOx filters and particulate traps) with the heavy construction industry to reduce air pollutants.

16. Provide employee benefits for ride sharing, walking, biking or taking public transit to work.

17. Adopt a policy that a minimum of 20 percent of the eligible workforce should participate in alternative work schedules or telework by 2010.

18. Develop an employee education program on policies/practices relating to the environment and energy conservation.

19. Establish an advisory commission (or “Green Team”) composed of local residents and business representatives to advise and assist the local governing board on policies and practices dealing with the environment, energy efficiency and conservation.

RESOURCES/LINKS:

[ICLEI--Outreach and Communications Guide](#)- A tool to help local governments effectively communicate climate information to their constituencies

20. Develop and implement an energy efficiency and conservation education program for the local community dealing with the environment and energy.

21. Create a water protection education program.

resource. Understanding water's flow through our daily lives informs the debate about the cost and value of public investments in municipal water supplies.

RESOURCES / LINKS:

[American Water Works Association](#)

[U.S. EPA Water](#)

[Water Resources Advisory Council](#)

[Statewide Resource Network](#)

[SEMCOG](#)

22. Offer incentives for residents and businesses to retrofit all lighting systems with energy-efficient bulbs.

23. Target major institutions and industries for an educational campaign about ways to reduce energy consumption.

24. Create a program to help residents replace older air conditioning and refrigeration units with more efficient models.

25. Implement real-time pricing of electricity to show residents the increased cost they experience during peak demand times.

26. Partner with nonprofit organizations and governmental agencies for the purpose of retrofitting existing facilities to improve energy efficiency.

27. Develop and implement programs to conserve energy used in transportation, including but not limited to:

- Employee flex time programs;
- Promoting use of satellite work centers;
- Development and promotion of zoning guidelines or requirements that promote energy efficient development;
- Development of infrastructure such as bike lanes and pathways and pedestrian walkways;
- Synchronization of traffic signals;
- State/local/regional integrated planning activities (i.e. transportation, housing, environmental, energy, land use) with the goal of reducing greenhouse gas emissions and vehicle miles traveled;
- Improvements in operation and system efficiency of the transportation system such as implementation of intelligent transportation system (ITS) strategies;

- Idle-reduction technologies and/or facilities to conserve energy, reduce harmful air pollutants, and greenhouse gas emissions from freight movement; and
- Installation of solar panels on interstate rights-of-way to conserve energy in highway operations and maintenance activities.

28. Implement distributed energy resource technologies that significantly increase energy efficiency, including:

- District heating and cooling systems
- Combined heat and power systems
- Cogeneration systems
- Energy storage systems
- Absorption chill
- Desiccant humidifiers
- Micro turbines
- Group source heat pumps

29. Consider the implementation of technologies to reduce, capture, and, to the maximum extent practicable, use methane and other greenhouse gases generated by landfills or similar waste-related sources, such as wastewater treatment plants, operations producing food waste, dairy farms and other animal operations.

RESOURCES / LINKS:

[The Michigan Climate Action Plan](#)

30. Replace traffic signals and street lighting with energy efficient lighting technologies, including light emitting diodes; and any other technology or equal or greater energy efficiency.

31. Update government buildings by developing, implementing and install onsite renewable energy technology that generates electricity from renewable resources, including solar energy, wind energy, fuel cells, and biomass.

32. Consider any other appropriate activities which have been outlined within a community's Energy Efficiency and Conservation Strategy as developed under the EECBG program.