City of Oberlin
2015 GHG Inventory
Climate Action Plan Update

Oberlin Sustainability Recognition

ICLEI Local Governments for Sustainability

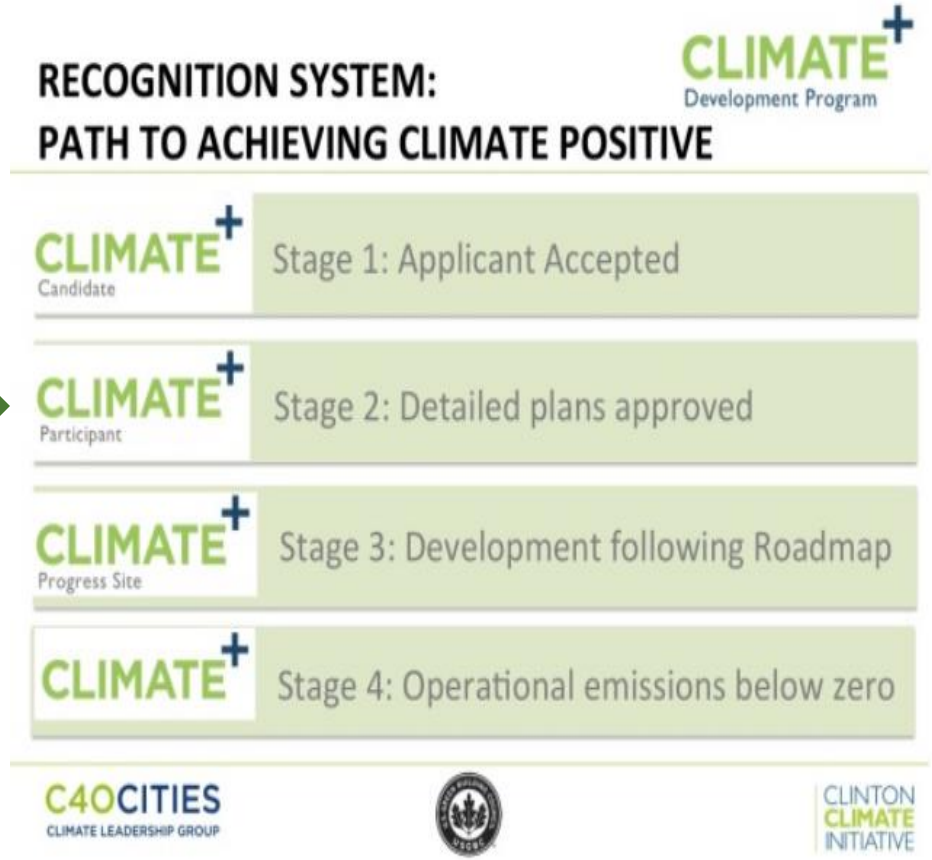
International association of local governments and national and regional local government organizations that have made a commitment to sustainable development

Five Milestones

- GHG inventory
- Establish Reduction Targets
- Develop Climate Action Plan
- Implement Policies and Measures
- Monitor and Verify Results

Oberlin Sustainability Recognition

Climate Positive Development Program



Oberlin Sustainability Recognition

CLIMATE ACTION CHAMPIONS

AN EFFORT UNDER THE PRESIDENT'S CLIMATE ACTION PLAN

THE WHITE HOUSE
WASHINGTON

U.S. DEPARTMENT OF ENERGY

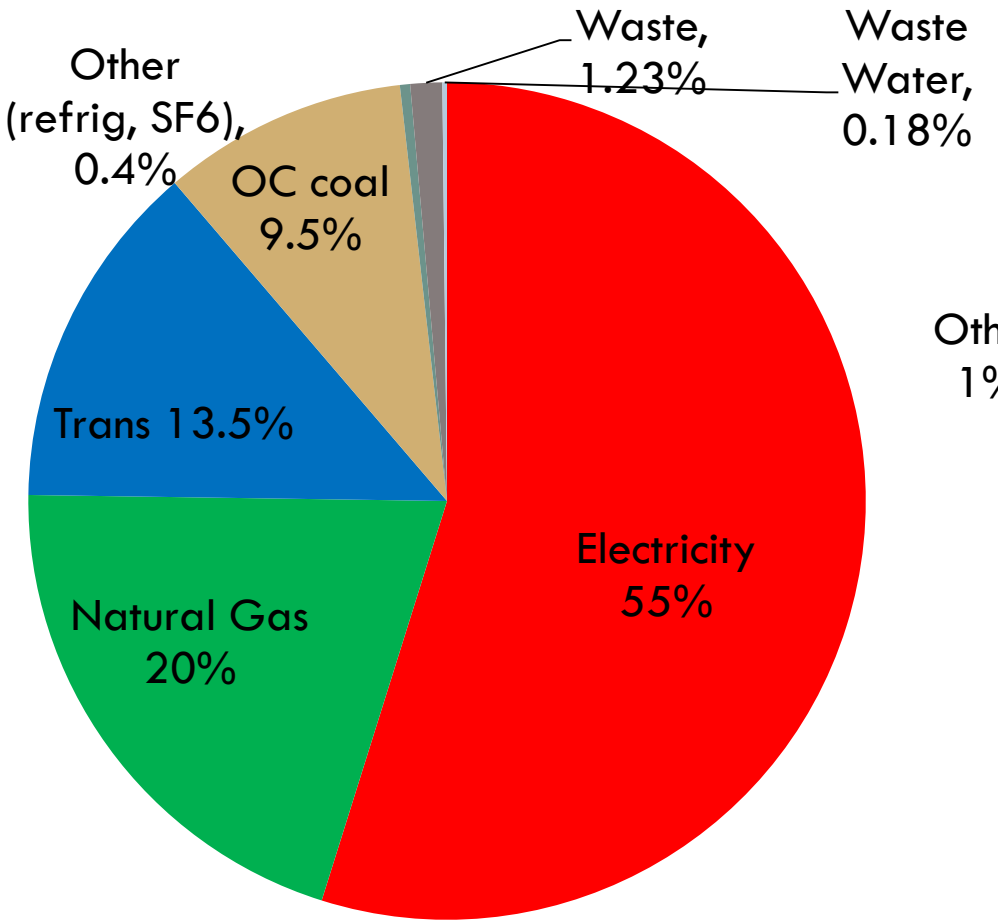
NREL
NATIONAL RENEWABLE ENERGY LABORATORY

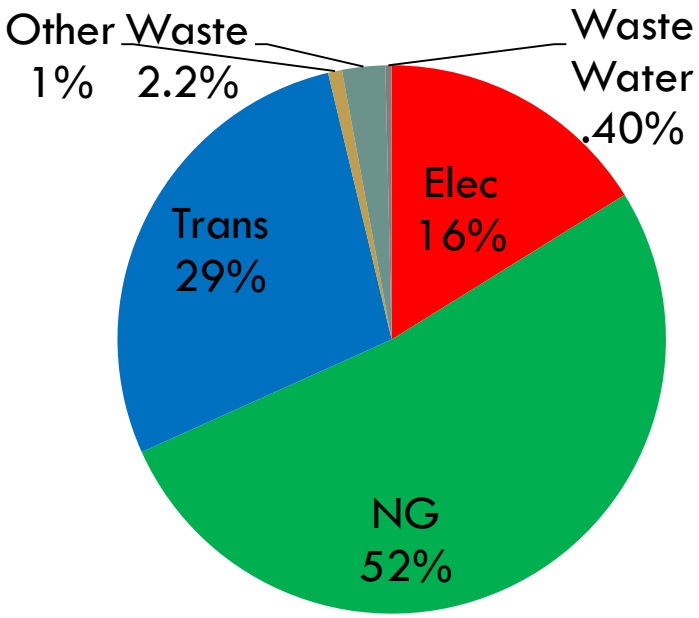
Greenhouse Gas Inventory

2012 - 2015 - 2017 GHG Emissions

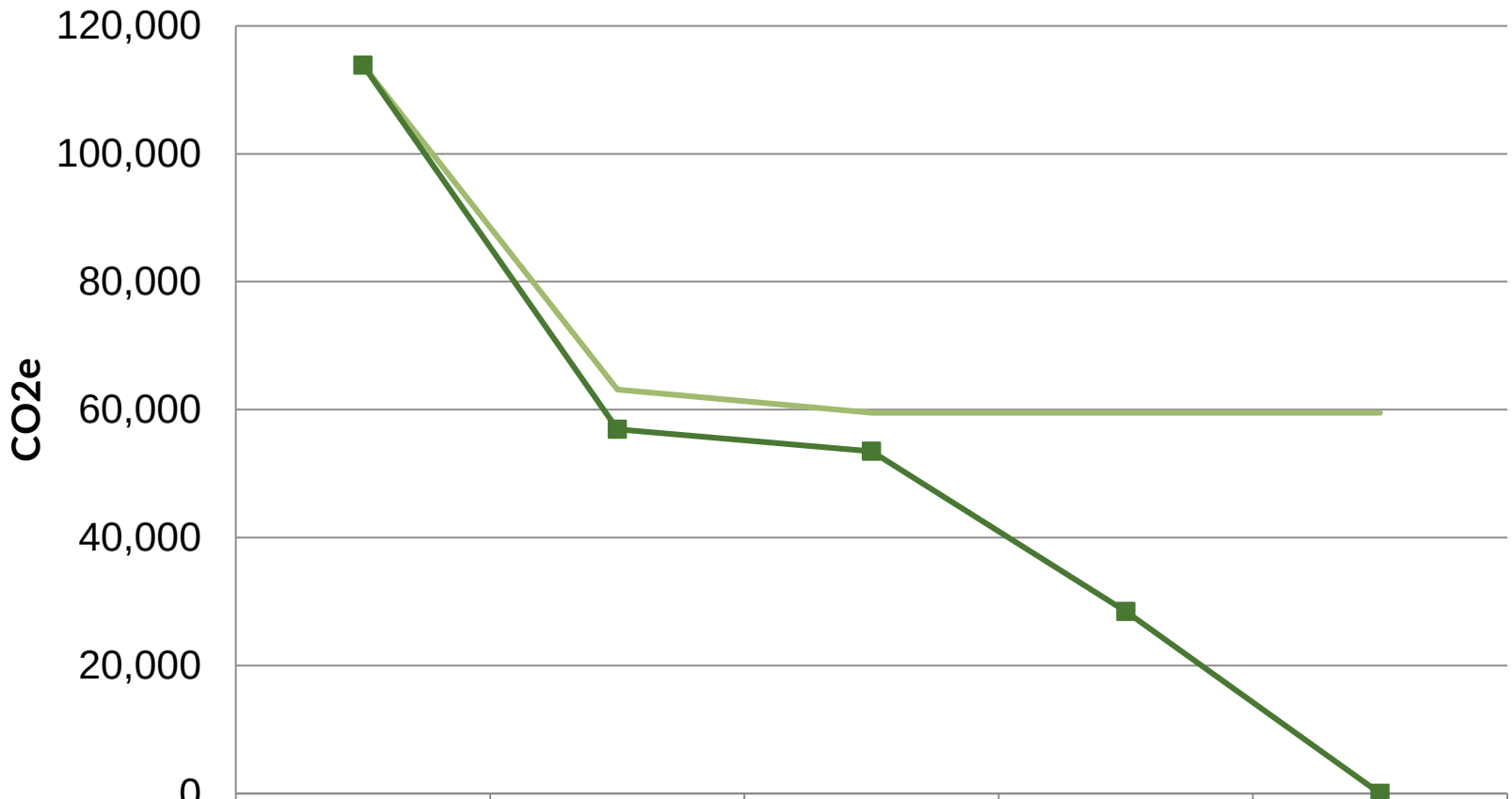
Sector	2012	% of total	2015	% of total	2017	% of total
Electricity	62,424	54.84%	12,097	19.16%	8,492	25.91%
Natural Gas	23,211	20.39%	32,769	51.90%	32,769	55.05%
Transportation	15,371	13.50%	16,207	25.67%	16,207	27.22%
OC coal	10,778	9.47%		0.00%		0.00%
Other (refrig, SF6)	450	0.40%	521	0.83%	521	0.88%
Waste	1,395	1.23%	1341	2.12%	1,341	2.25%
Waste Water	202	0.18%	201	0.32%	201	0.34%
Total	113,832		63,136		59,531	
Reduction	**100%**		**44.54%**		**47.70%**	

2012—2017 Emissions





GHG Target and Trend: 2012 Baseline



	2012	2015	2017	2030	2050
CO2e	113,832	63,136	59,531	59,531	59,531
Goal	113,832	56,916	53,501	28,458	0

Oberlin Climate Action Plan

Renewable Energy

Energy Efficiency

Green Building

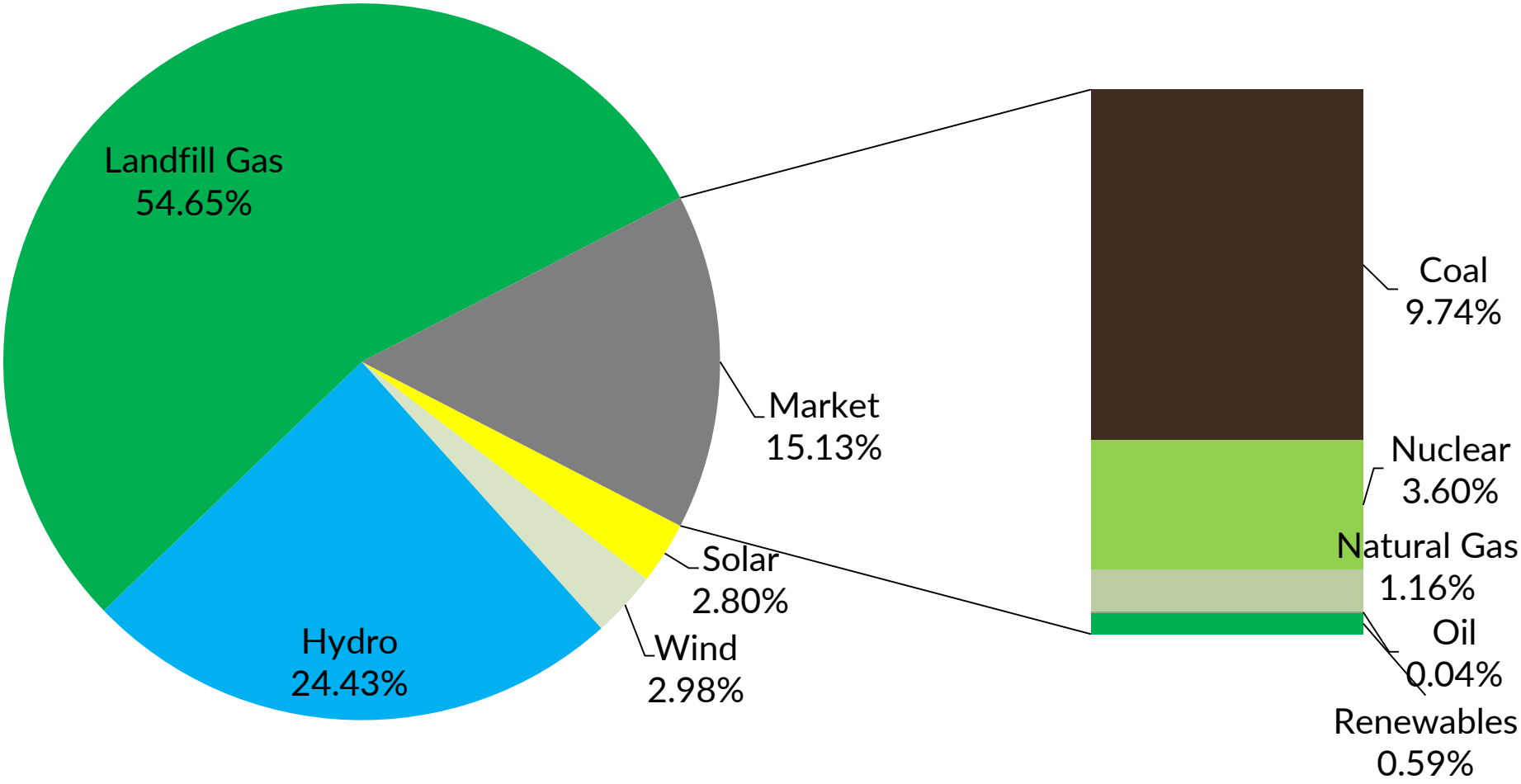
Solid Waste Management

Transportation

Education

Renewable Energy

2017 Oberlin Portfolio by Project



Renewable Energy

Landfill Gas – 55%

- Geneva – Waste Management
- Mahoning County – Waste Management
- Erie County – BioGas Technology

Hydro – 24%

- Belleville – AMP Joint Venture
- Willow Island – AMP Hydro Phase 1
- Smithland – AMP Hydro Phase 1
- Cannelton – AMP Hydro Phase 1
- Meldahl – AMP Hydro Phase 2
- Greenup – AMP Hydro Phase 2
- NYPA

Wind – 3%

- Bowling Green – AMP Joint Venture
- Blue Creek Wind – Iberdrola Renewables – Van Wert, Ohio

Solar – 3%

- Spear Point Solar One - Oberlin College

Renewable Energy

Residential Solar

6 installations – 18.8 kW

Commercial Solar

5 installations – 185.8 kW

Approximate kWh per year

204,600 kWh – 23 homes

GHG emissions avoided

2015 – 23 MT CO2e

OH SUN -

Lorain County Solar Co-op

100 + homes / 6 - 12 Oberlin

10% - 20% discount

Renewable Energy – Potential Strategy

Climate Action Champion Technical Assistance

Cold Climate Heat Pump Evaluation

DOE

NREL

Results in August

Energy Efficiency - Residential

POWER

Creating Affordable, Comfortable & Healthy Homes

Columbia Gas® of Ohio

THE GREEN EDGE FUND

The Bill Long Foundation

Energy Audits

316 Homes

Weatherization Work

131 Homes

Leveraged Dollars

$268,000

Energy Savings

$633,000

CO2e reductions

98.75 CO2e

Energy Efficiency - Commercial

Oberlin College	NACS
FAA	Drug Mart
Kendal	Welcome Nursing Home
General Plug	AgriNomix
Allen Mercy Hospital	Lorenzo's
IGA	Certified Oil
Splash Zone	First Church
Republic Services	Subway
RR Donnelly	Herrick Jewelry

Energy Efficiency

Commercial & Residential 2014 - 2016

kWh Reduction - annual

1,689,000

CO2e Reduction - annual

192 MT

Project Costs

$814,474

Energy Savings – annual

$156,111

Energy Savings - lifetime

$2,250,463

Energy Efficiency

Commercial & Residential 2011 - 2016

kWh Reduction - annual

7,900,000

CO2e Reduction - annual

804 MT

Project Costs

$2,490,000

Energy Savings – annual

$639,027

Energy Savings - lifetime

$7,832,704

Energy Efficiency - Municipal

- Police Department
- Court offices
- Street light LED conversion
- Power plant LED upgrade
- Tech Services office LED upgrade

Total Municipal Projects

kWh Reduction annual
245,000

CO2e Reduction - annual
28 MT

Project Costs
$106,799

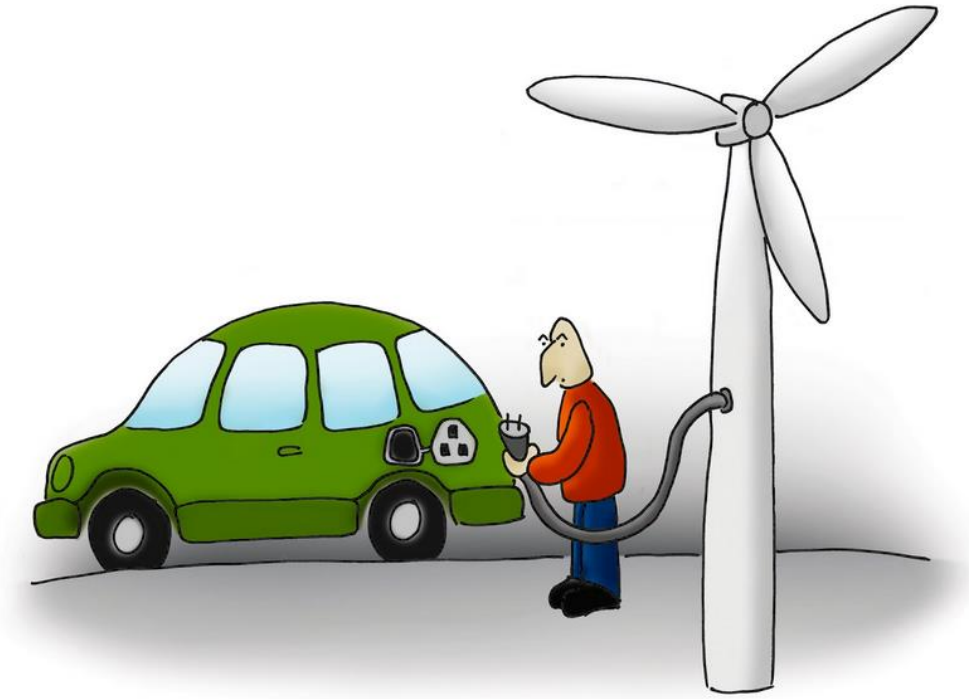
Energy Savings - lifetime
$331,793

kWh Reduction - lifetime
3,085,000

Energy Efficiency – 2016

- LED Street Lights
- City Hall - Exterior
- Old City Hall - Exterior
- Finance Department
- Court Lobby
- GMD
- Rebate program for all electric homes
- Increasing rebates for small commercial

Transportation



2012

13.5% of emissions

2017

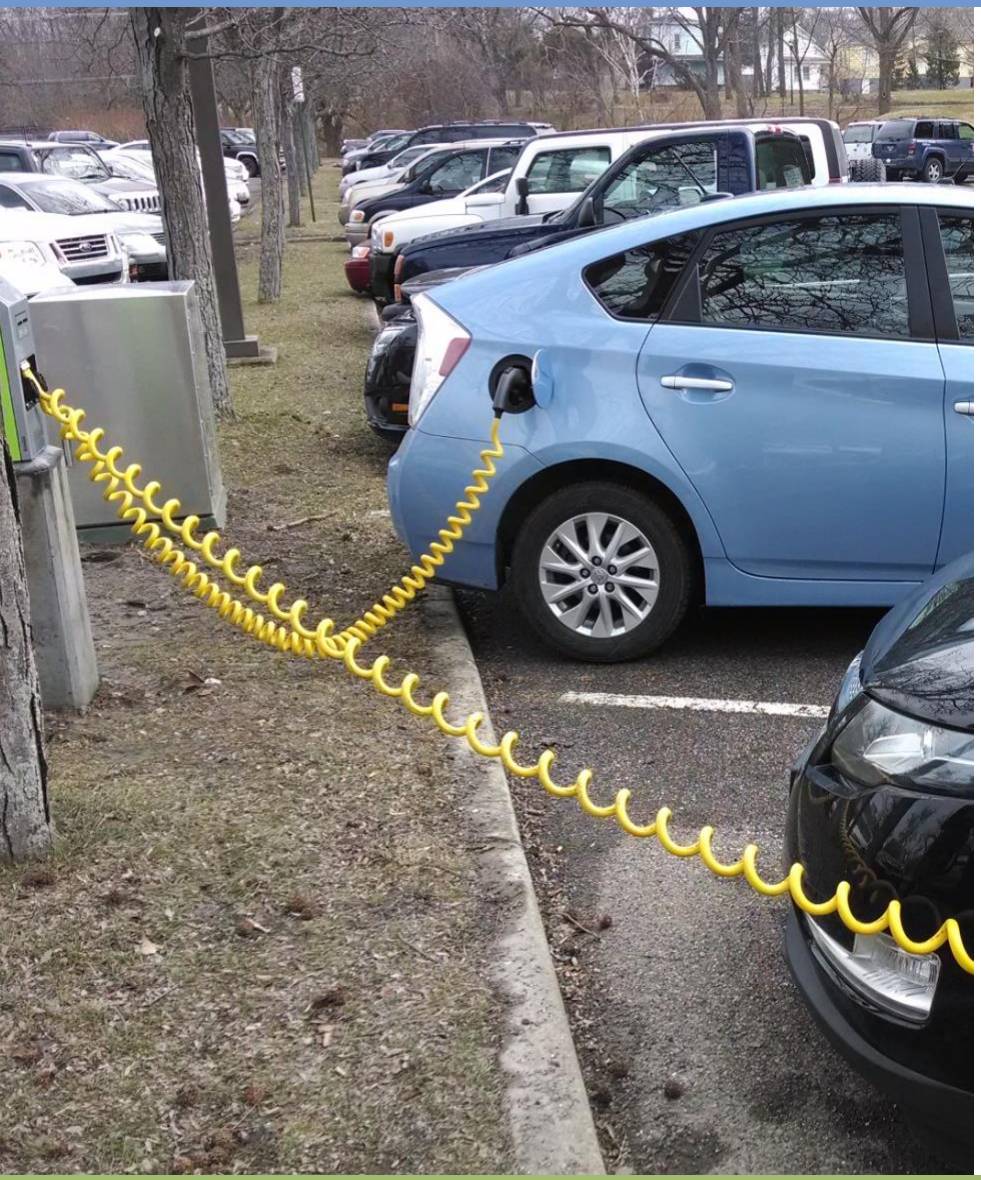
28% of emissions

Transportation

OMLPS Electric Car

- 968 kWh = 2849 miles – 1 MT CO2e

Transportation



- EV Charging Station
- Safe routes to schools
- Oberlin connector service
- Anti-idling policy
- Efficient fleet standards
- Alternative-fueled & hybrid
- Expanded bicycle parking

Transportation

Complete Streets Resolution

Bicycle lanes & bicycle marking

Bike Friendly Community - bronze

CareShare by Enterprise

Shopping shuttle – OC

M.O.V.E. Lorain County

Green Building - Residential

East College St

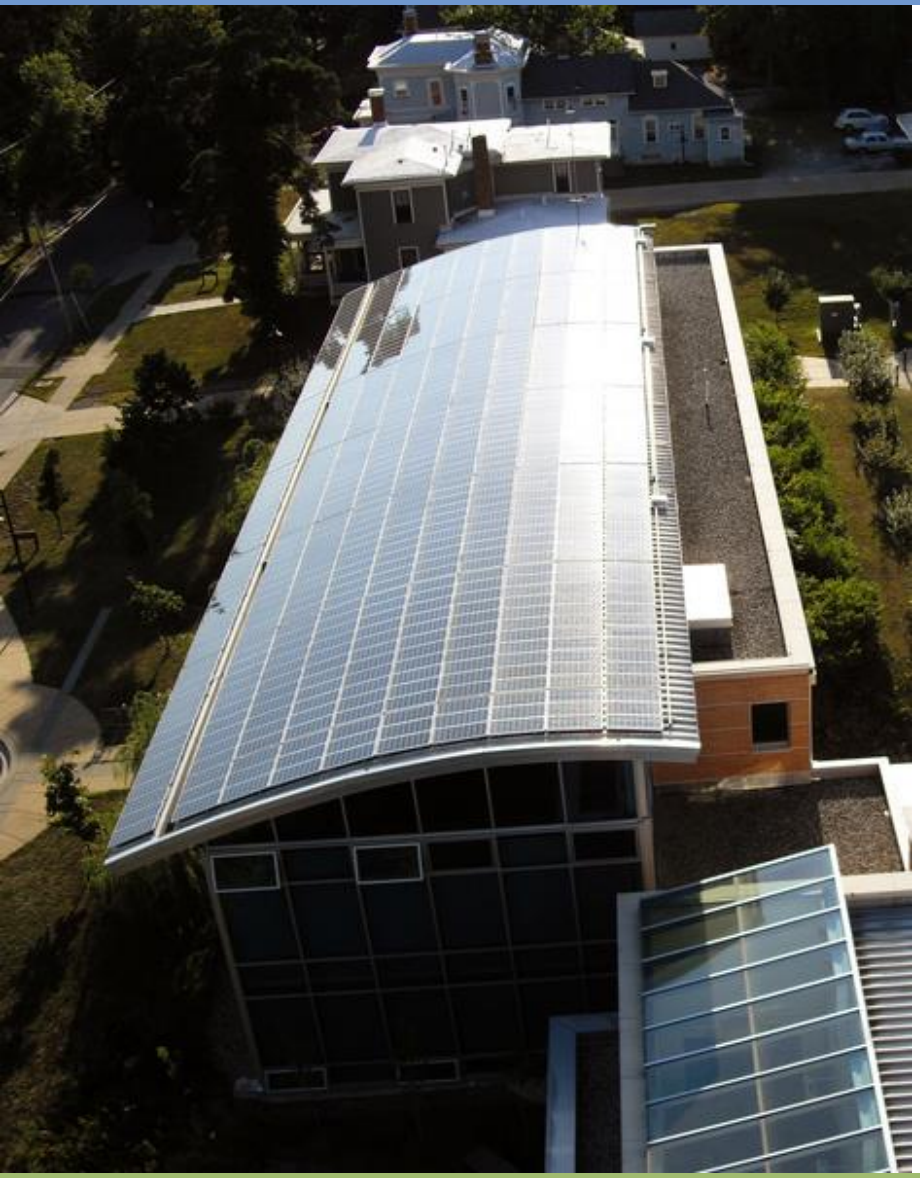
Lincoln St

Cypress St

Smith St

Spruce St

Green Building - Commercial



City of Oberlin – LEED Silver or better

- Oberlin Fire Station

Oberlin College – LEED Silver or better

- The Hotel at Oberlin
- Kohl Building
- Kahn Hall
- Allen Art Museum

East College St. Project

- Energy Efficient
- Electric Renewable Energy Heating

Waste Management

Waste Management
ZERO WASTE PLAN

"Zero Waste is the City's goal to minimize the final disposal of waste materials as completely and rapidly as possible. This reduction will be achieved using a combination of environmentally sound strategies with an emphasis on education, on source reduction and reuse, and on recycling and composting."

Waste

- 141 ton reduction in 2015 vs. 2012

Recycling Rate

- 233 ton increase in 2015 vs. 2012
- 30.29% recovery rate

ZWP Waste Management Strategies

- Single-Stream Recycling
- Fully automated – cart based
- Residential - November 2014
- Business District & College – Feb 2015
- Increased recycling in commercial and multi-family
- 30.4% curbside pickup increase
- 210 MT CO_2e reduction

Education and Awareness

- Oberlin Public Library
- Slow Train Café
- Public Schools – 4
  - Ben Franklins
  - Kendal
  - Oberlin Early Childhood Center
- Oberlin Business Partnership
- Adam Joseph Lewis Center
- Oberlin College

Education and Awareness

- Oberlin Public Schools
- Oberlin College Dorms
- Oberlin College Cooperatives
- Celebration Parade
- Lights for Bikes

Education and Awareness

Sustainability Tracking, Assessment & Rating System™

Oberlin Public Schools

Oberlin College

Lorain County Community College

Lorain County Joint Vocational School

Potential Strategies

Renewable Energy
AMP Hydro Phase III
Customer-Owned Solar Generation
Replace Natural Gas for Heating
Energy Efficiency
Building Performance Disclosures for Residential and Commercial Properties
Develop One-Stop Shop for Commercial Energy Efficiency and Assistance
Transportation
Explore Changes to Parking Infrastructure and Policies
Green Building
Facilitate Development of City-owned Green Acres Property
Develop Commercial and Residential Green Building Certification Programs

Waste
Evaluate Methane Production for Re-Use
Evaluation of Producing Class A Bio-Solids
Education and Awareness
Create a Community and/or Business Environmental Award
Promote Green Business and Green Restaurant Membership
Develop Support of a Buy Local Campaign
Annual Speaker and Film Series
Hold Community Workshops to Educate the Community

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