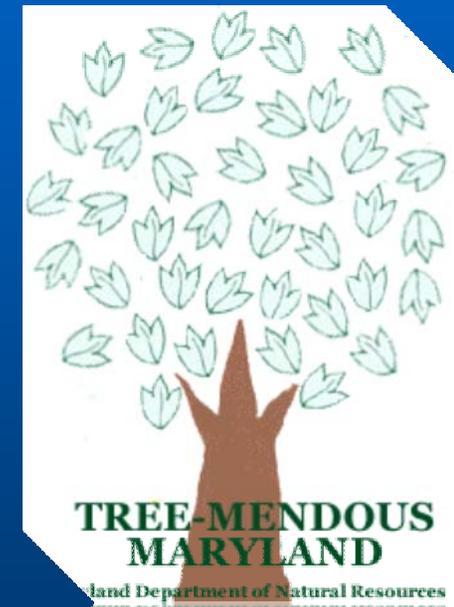


Greenhouse Gas Inventories Baltimore County and County Government 2002-2006

Patricia Brady
Environmental Science
Towson University
Brian Fath, Ph.D., Advisor

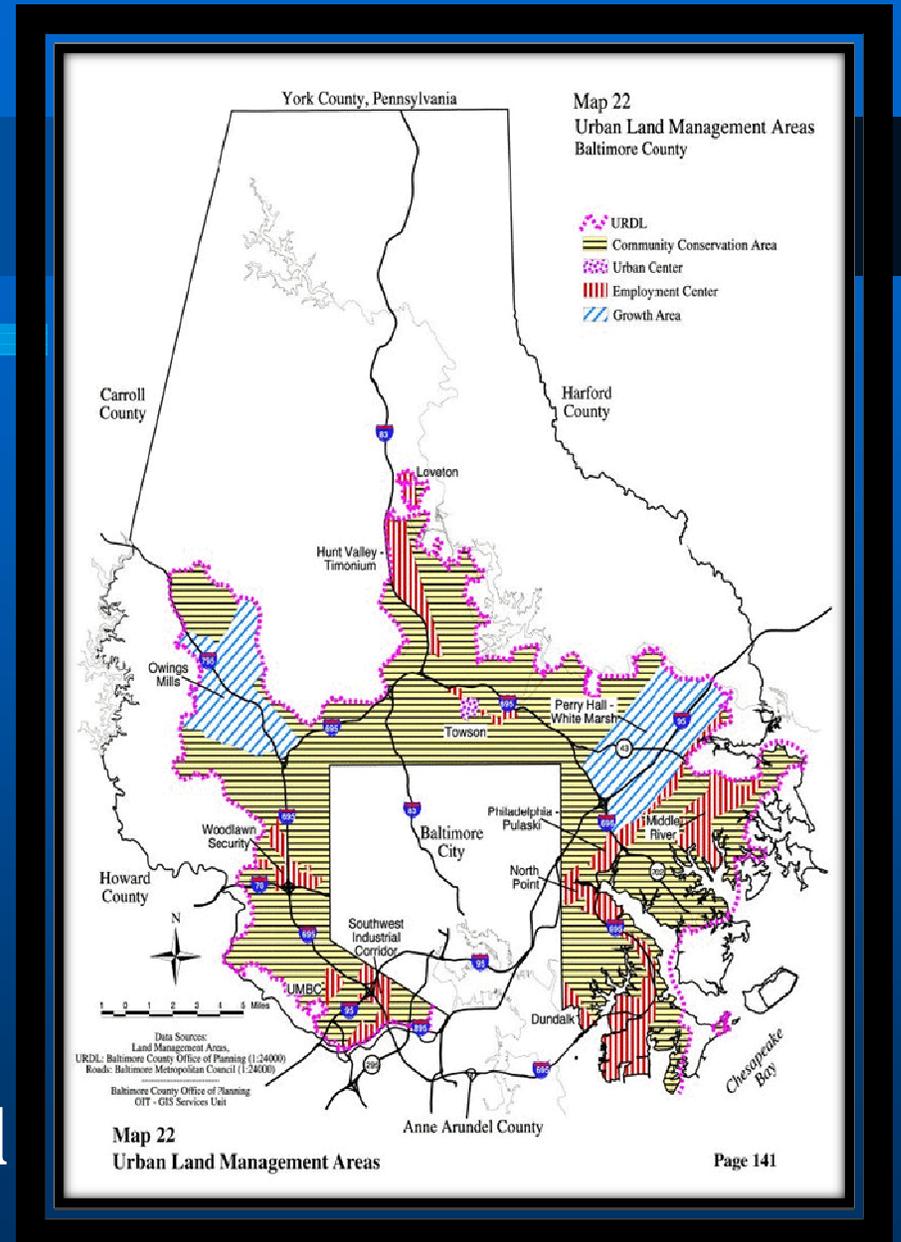
Baltimore County Greenhouse Gas Inventory

- Overview
- Inventory and Results
- Significance



Community

- 600 square miles
- 600,000 vehicles
- 315,000 households
- Commercial/Industrial



General Government Operations



4/21/2009

Baltimore County GHG Inventory

4

Inventory Methodology

- Clean Air and Climate Protection software developed by International Council for Local Environ Initiatives
- Total fuel use X Emissions factors
- Aggregates CO₂, CH₄ and N₂O
- Tons eCO₂

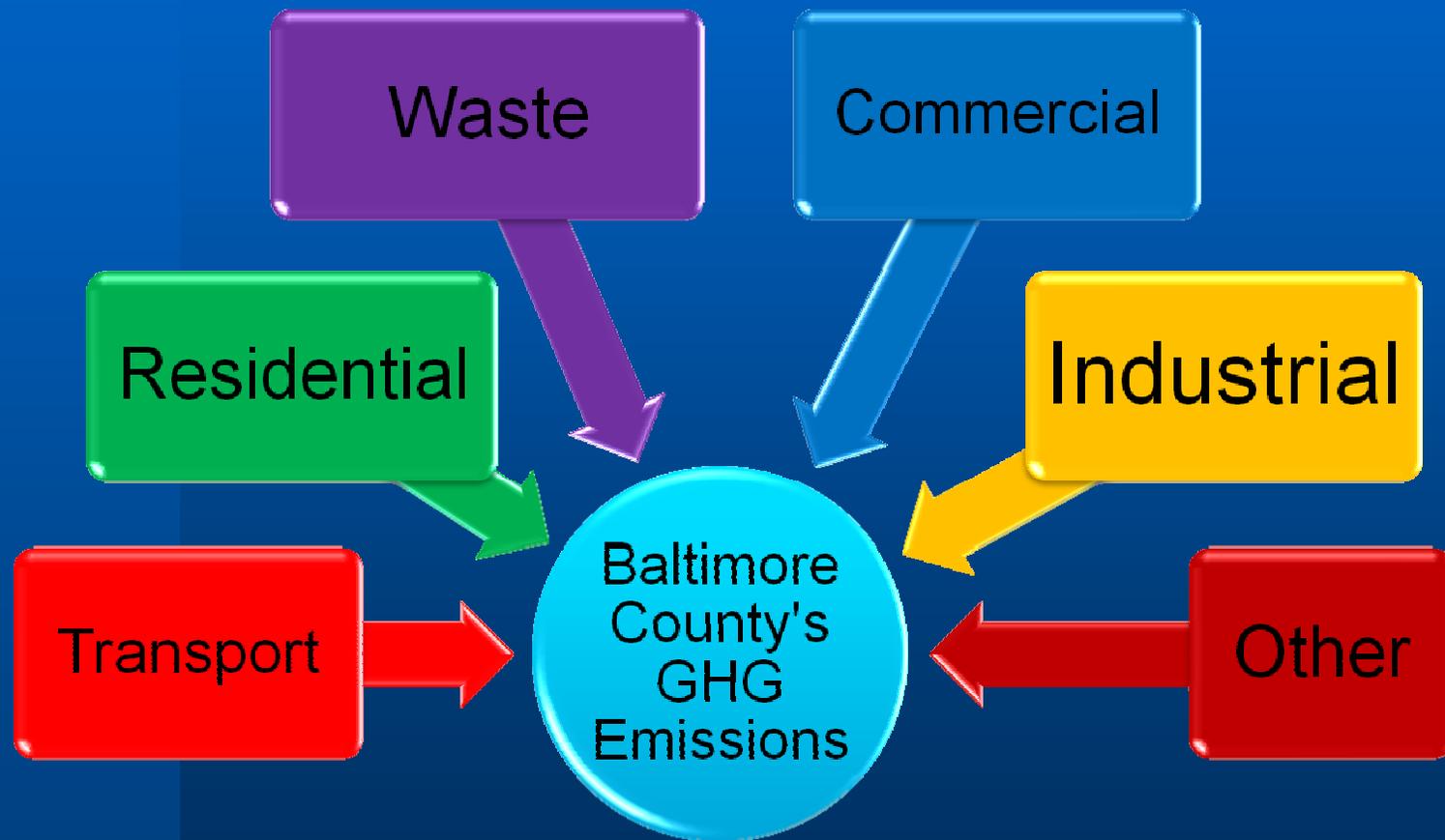


Analysis

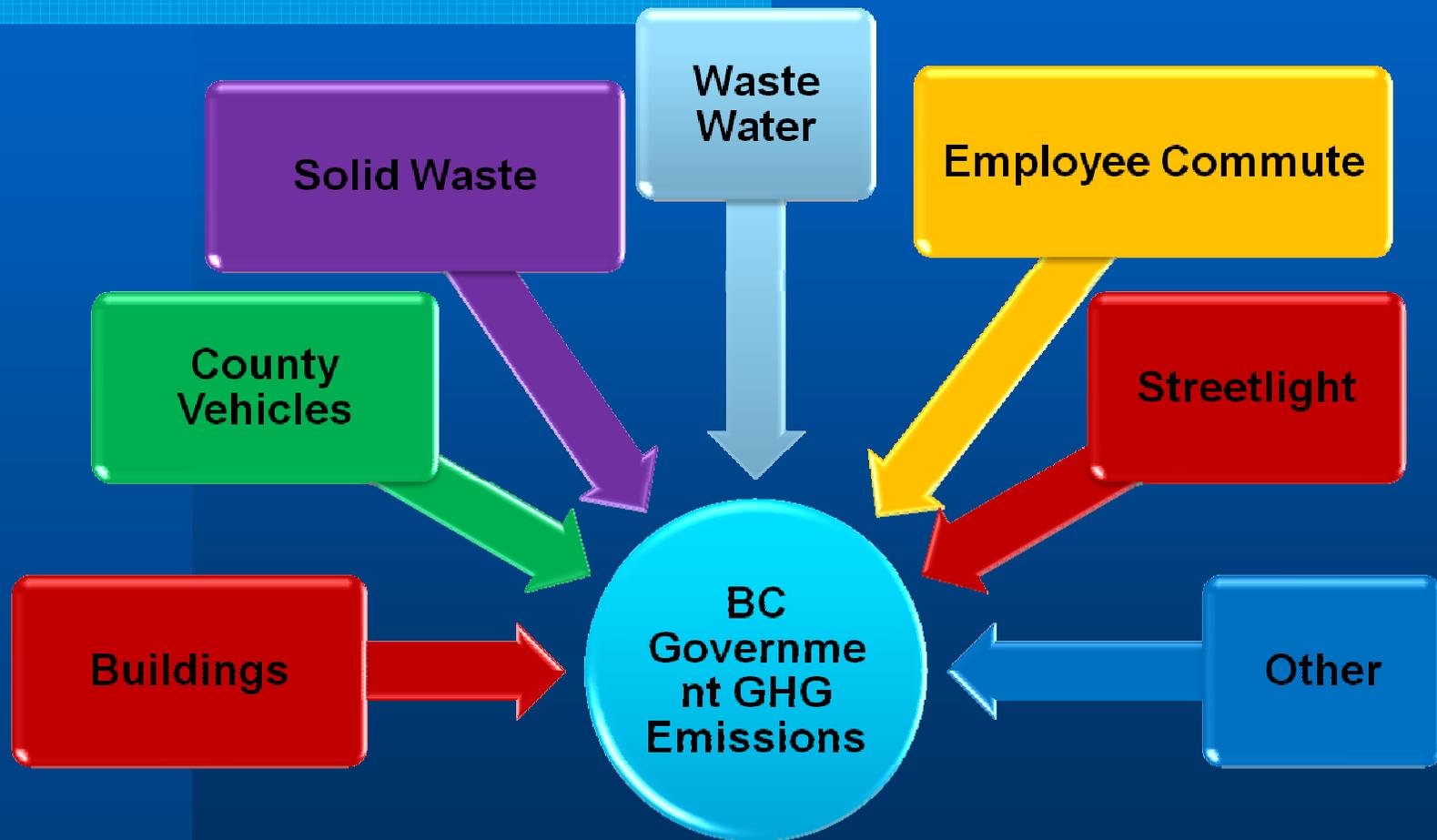
- Spans 2002-2006
- Forecast Year
 - (BAU) - 2012
 - (10% reduction) - 2012
- (Maryland Climate Action Plan)



Community Sectors



Government Sectors

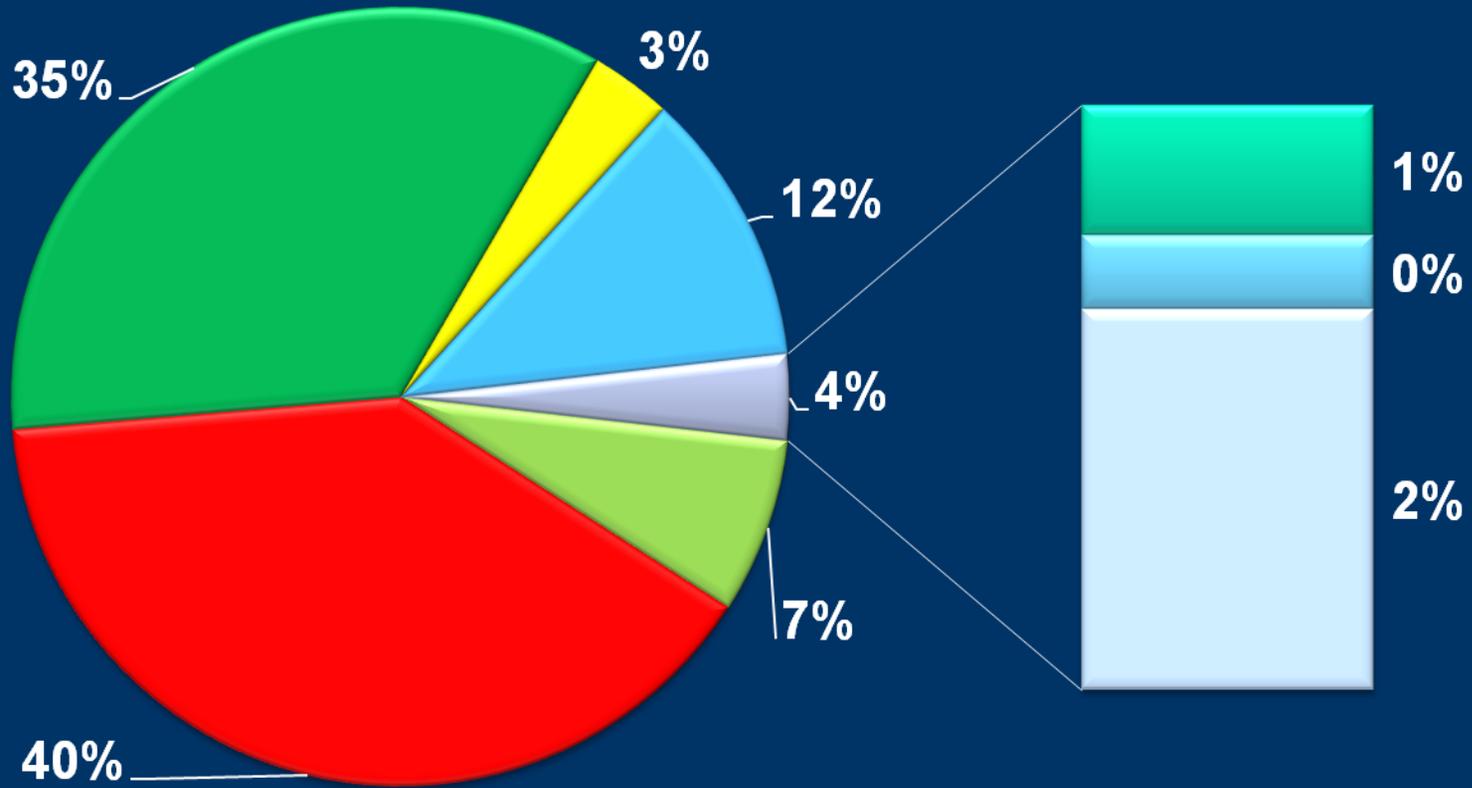


Results of Community Inventory

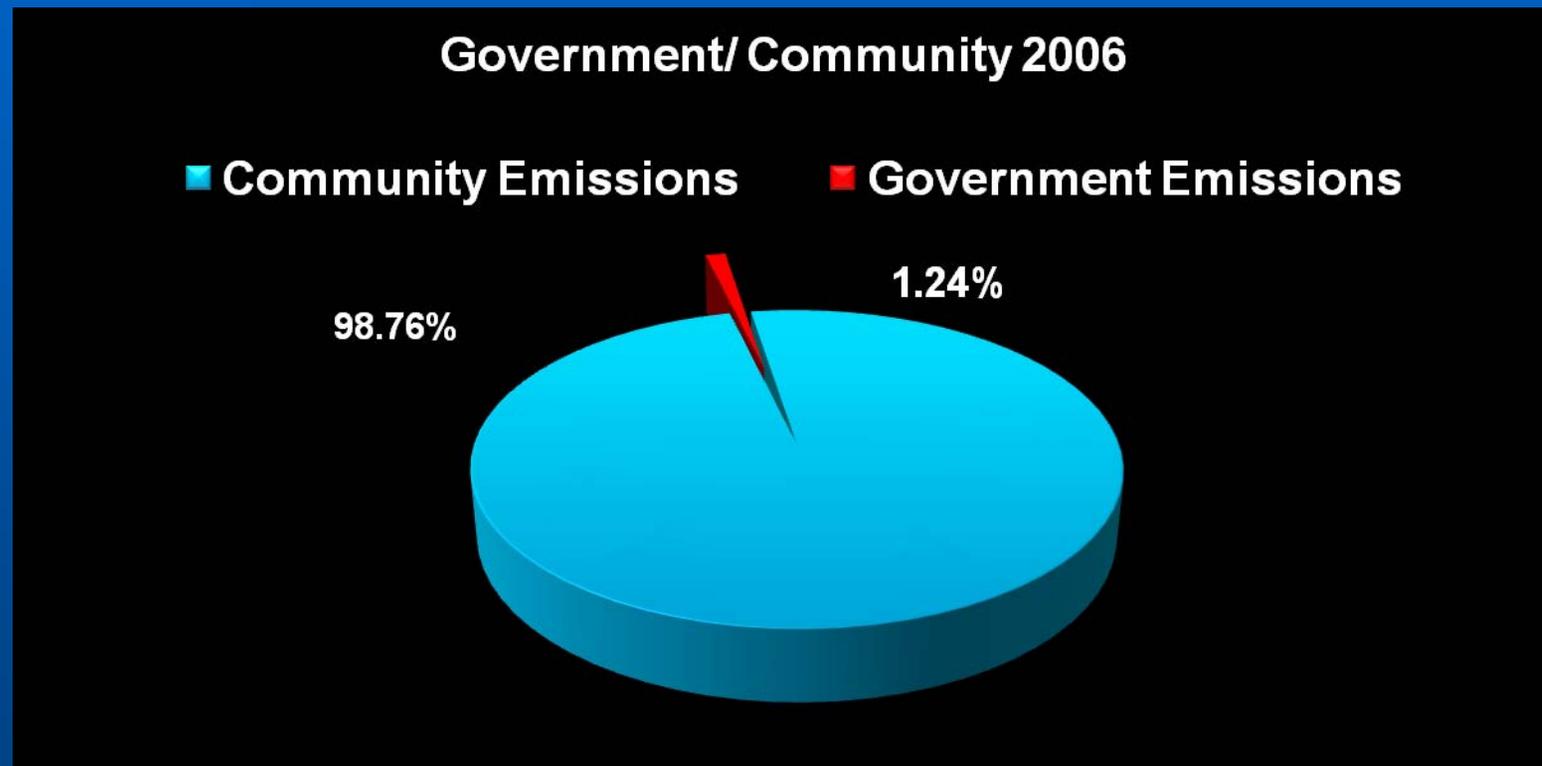
Year	2006	Metric Tons eCO ₂	%
Residential	3.5 Billion kWh	3,195,697	27.7
Commercial	2.2 Billion kWh	2,331,496	20.2
Industrial	1.3 Billion kWh	956,473	8.3
Transportation	8.3 Billion VMTs	4,897,796	42.4
Waste	763,000 tons	166,805	1.4
Total		11,548,267	100
Population		787,762	
per capita Emiss.		14.66	

Community Emissions by Source 2006

- Diesel
- Electricity
- Gasoline
- Light Fuel Oil
- Natural Gas
- Propane
- Kerosene
- Other



Government – subset of Community

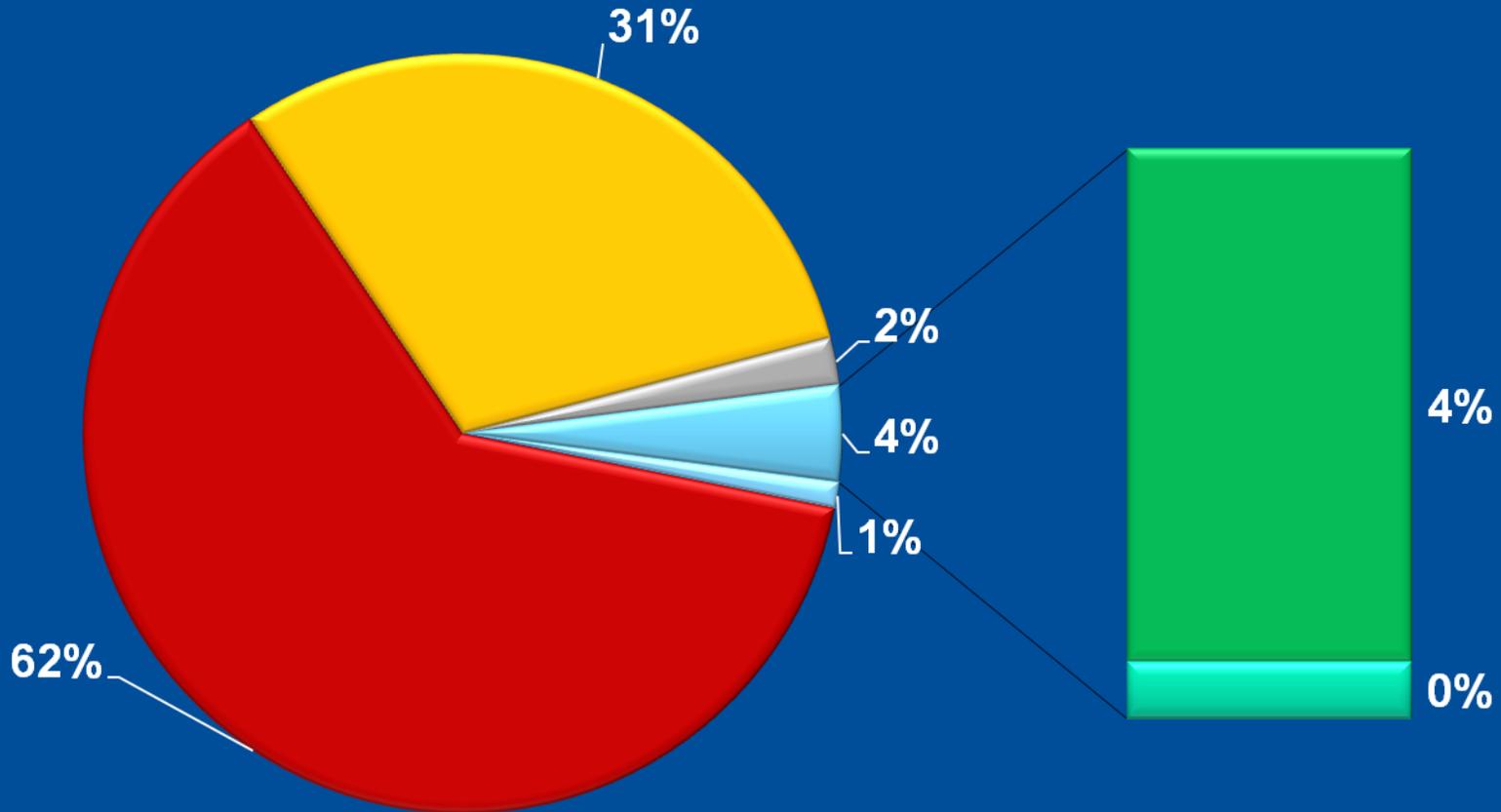


Results of Government Inventory

Year 2006	Annual Usage	MTons eCO₂	%
Buildings	55 million kWh	39,629	27.8
Vehicle Fleet	23 million VMT	20,162	14.1
Emp.Commut	46 million VMT	24,820	17.4
St.Lights/Sign	30 million kWh	18,854	13.2
WasteWater	43 billion gals	38,665	27.1
Waste	2500 tons	572	0.4
Government Emissions		142,701	100.0
Community Emissions		11,548,267	

Government Emissions by Source 2006

- Diesel
- Electricity
- Gasoline
- Light Fuel Oil
- Natural Gas
- Other



Comparisons with other Govs.

	% Emissions		
Gov't	Baltimore*	Annapolis	Durham
Buildings	27.8 (33.7)	27.5	47
Vehicle Fleet	14.1(17.1)	31.8	16
Staff Commute	17.4 (0.0)	NA	NA
Streetlights	13.2(16.0)	10.3	8
Water/Sewage	27.1(32.8)	29.6	29
Waste	0.4(0.5)	0.7	<1.0
% Emissions	100(100)	99.9	100
* with(with-out) Staff Commute			

Maryland GHG Inventory

- **2005 Gross Emissions**
 - 109.4 MMT CO₂e
 - 19.7 MT CO₂e per capita annually
- **Baltimore County**
 - 11.7 MMT CO₂e
 - 14.66 MT CO₂e per capita annually

Significance

- **It's a Beginning**
- **Personal Footprint**
 - 5% dec VMT (2008), 6% dec kWh (2006)
- **Needed for informed action**
- **Lead by example**
- **Currently not mandatory**

Significance

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Significance

- **SB 0278 GHG Reduction**
 - Passed MD General Assembly
 - on Monday, 4/13

Thank You for your support

- **County Executive Smith**
- **County Council**
- **David Carroll and County Staff**
- **CEQ – Kathy, Rex and others**
- **Dr. Brian Fath, Towson University**

Thank You for your support

Charles Reighart – BC, Solid Waste
Connie Smiddy – BC, Buildings Data
JoAnn Famolaro – BC, Buildings Data
Bill Frankenfield – BC, Waste Water
Bob Majewski – BC, Vehicles
John Markey – BC, Statistics
Greg Carski – BC, Streetlights
Michelle McFadden – BC, Admin
State Highway Admin – VMT
BGE – Energy Use data
John Quinn – BGE, Emission factors
Steve Myer – BC, Energy procurement
Rayford McEachern – Balt. City, Waste Water
Andrew Keys – NMWDA, Waste

