MONTGOMERY COUNTY CLIMATE INITIATIVES

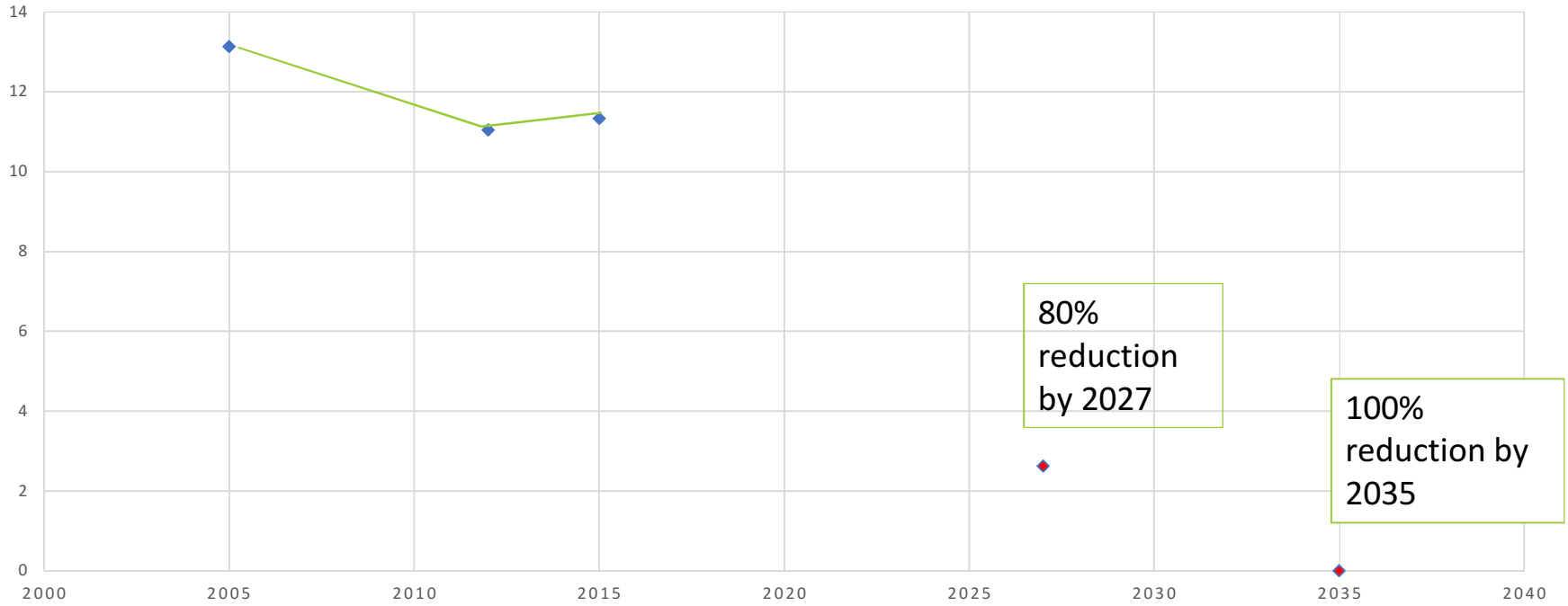
BRIEFING FOR TRANSPORTATION & ENVIRONMENT COMMITTEE

APRIL 5, 2019

Agenda

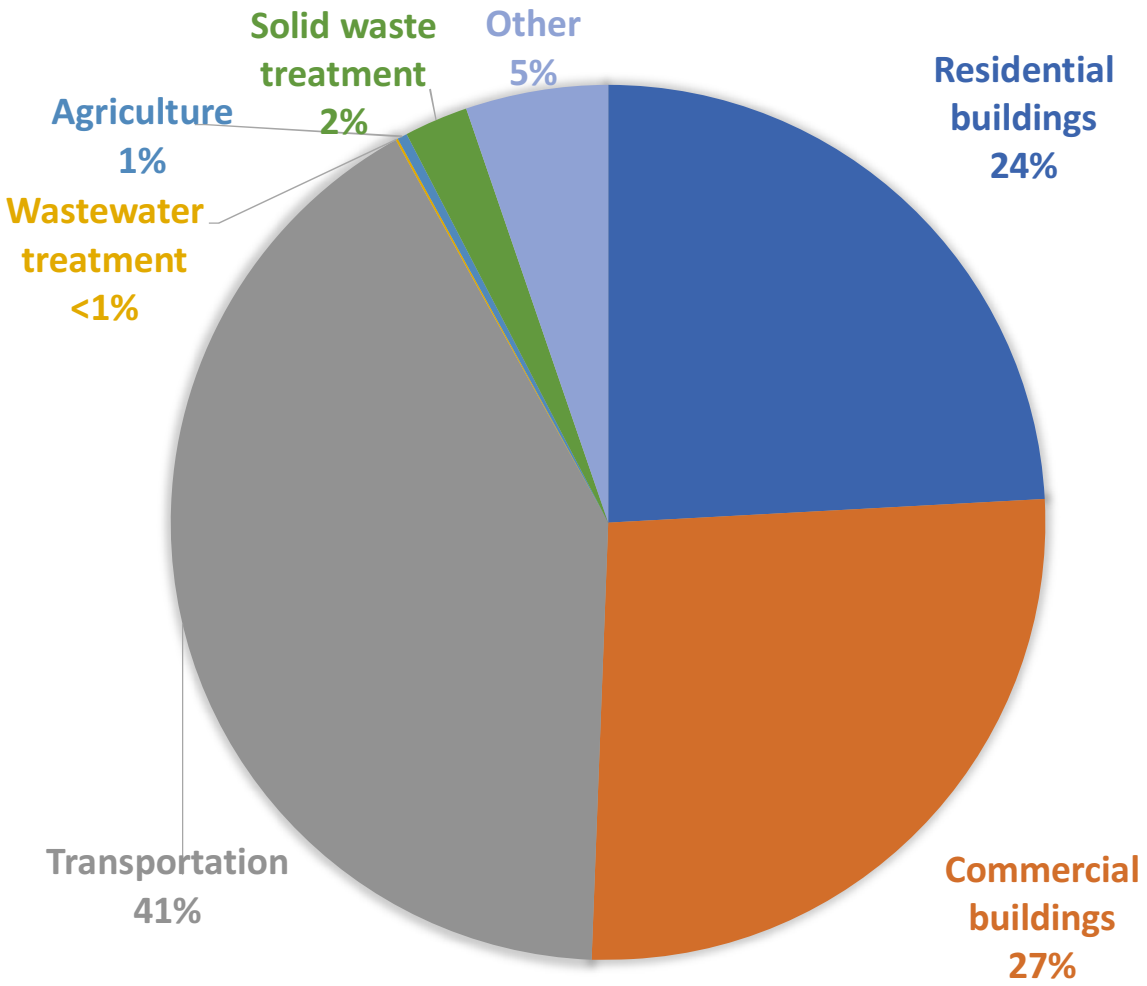
1. Greenhouse Gas Inventory data
2. Current actions & opportunities for buildings, energy supply, and transportation
3. Climate planning and coordination
4. Micro-actions each of us can take

Montgomery County Greenhouse Gas Emissions Trends (million metric tons of CO_2e)



Source: Metropolitan Washington Council of Governments (MWCOG) Montgomery County GHG Inventory

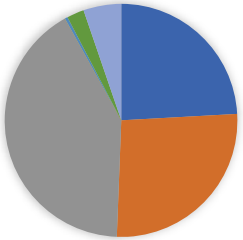
Montgomery County Greenhouse Gas Emissions Profile (2015)



2015 total emissions: 11.34 million metric tons of CO_2e

Source: MWCOG Montgomery County GHG Inventory

80% Emissions Reduction Goal by 2027



2027 Emissions goal: 2.6 million metric tons of CO_2e

100% Emissions Reduction Goal by 2035

2035 Emissions goal: 0 metric tons of CO_2e

Residential buildings

24% of emissions

OF HOUSING UNITS:
356,603

Source: MWCOG Montgomery County GHG Inventory

Residential Building Initiatives

Implemented / In process:

- Energy efficiency/weatherization services to low-income households
- Energy efficiency incentives for limited-income multifamily communities
- Energy Coach
- Green Bank financing for energy efficiency improvements

Opportunities for:

- Pursuing greater energy efficiency through building codes and incentives for weatherization

Commercial buildings

27% of emissions

TOTAL # OF COMMERCIAL BUILDINGS:

4,570

891 COMMERCIAL BUILDINGS BENCHMARKED

TOTAL COMMERCIAL SPACE:

151.7 MILLION SQUARE FEET

94.7 MILLION SQUARE FEET BENCHMARKED

Sources: total # of buildings and SF: MWCOG Montgomery County GHG Inventory; benchmarking #'s: DEP, CY2017.

Commercial Building Initiatives

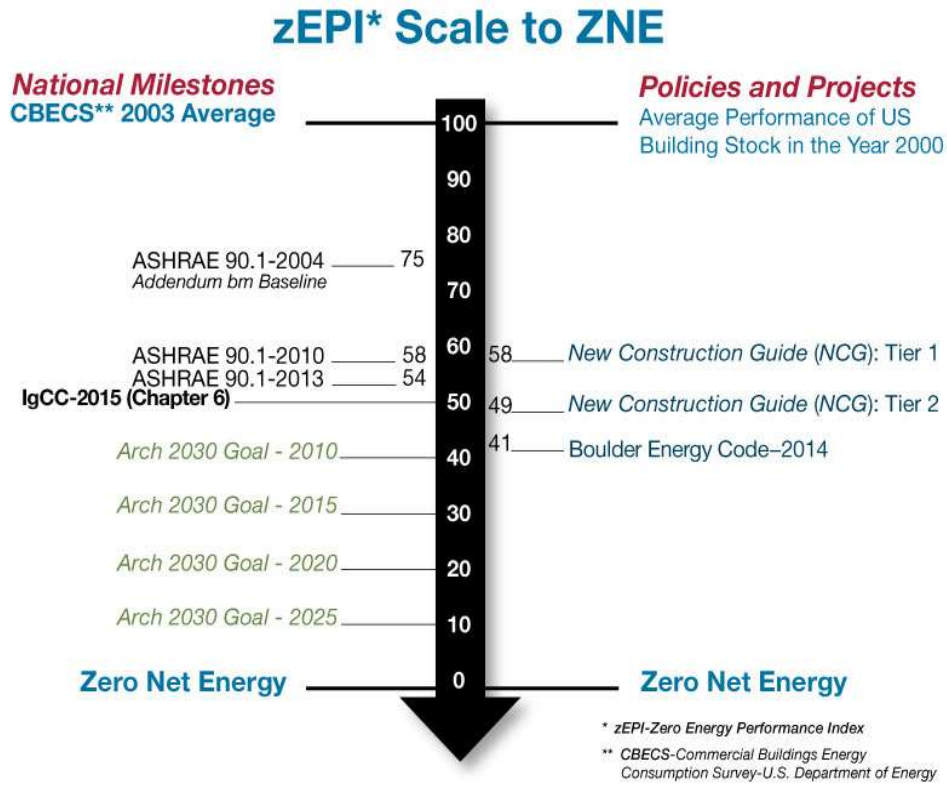
Implemented / In-process:

- Green building codes
- Energy benchmarking
- C-PACE financing
- Green Bank financial products
- Revisions to the County's current green building tax credit, which is based on LEED certification. Stakeholder work group recommendations under review by the County Executive and DEP.

Opportunities for:

- Developing a strategy for achieving improved energy efficiency in new and existing buildings, including by continuing to adopt aggressive building energy codes
- The County Executive supports expanding the commercial benchmarking law to include smaller buildings and multifamily properties.

Montgomery County's Adopted Zero Net Energy Performance Index (zEPI) is 50



International Green Construction Code Effective 12/1/2017

- New construction and additions 5000 square feet and above
- Does not apply to single family or to renovations/alterations
- Construction and Demolition waste diverted from landfills – minimum of 50%
- Enhanced energy performance of 50% better than 2012 IECC
- Heat Island Mitigation – minimum of 40%
- Project electives – enhanced stormwater, water reclamation, daylighting, vegetation, acoustics, etc.
  - GFA less than 10,000 square feet – 2 project electives
  - GFA 10,000 – 20,000 square feet – 3 project electives
  - GFA over 20,000 square feet – 4 project electives
- LEED Silver may be offered in satisfaction of project electives

County Facilities & Lighting Initiatives

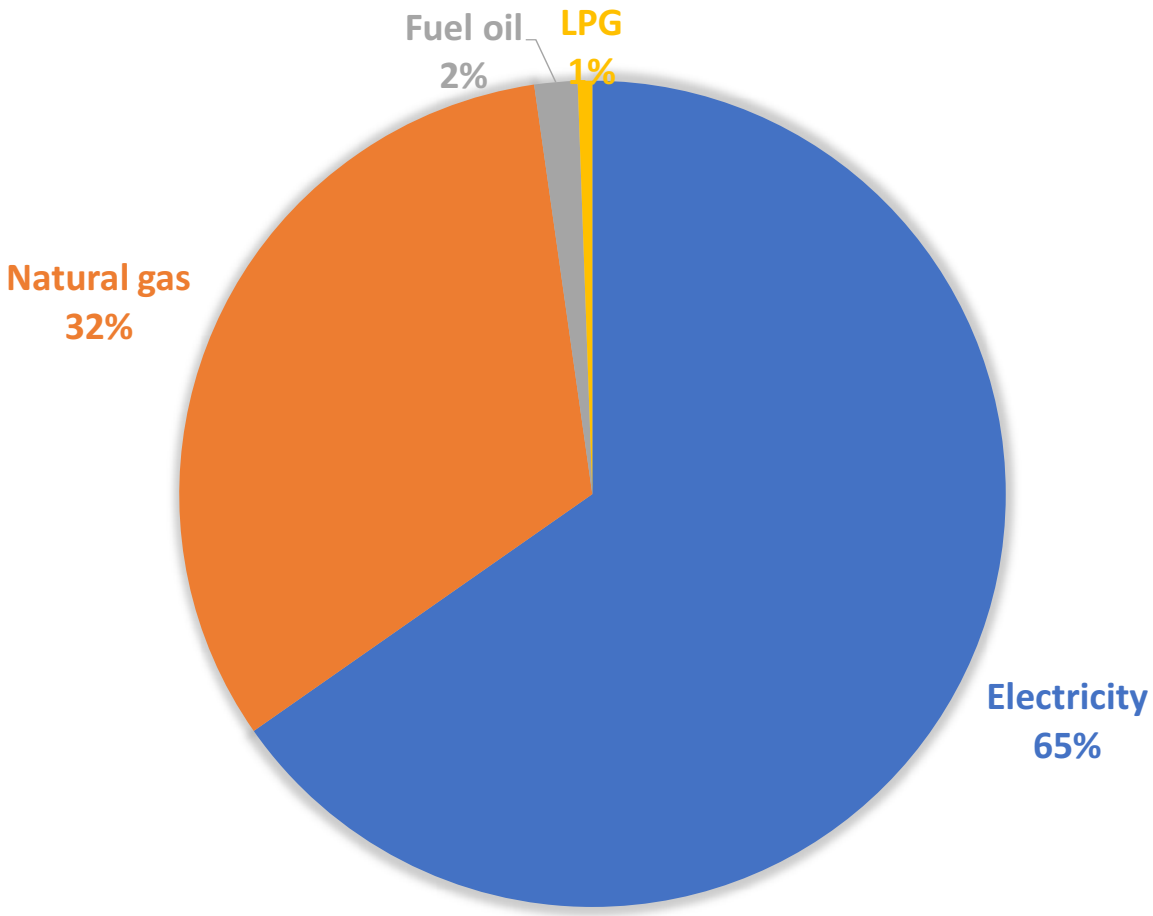
Implemented / In process:

- 56 energy projects since 2014
- 13 LEED Gold and 7 LEED Silver buildings as of 2018 + Wheaton Office Building will be LEED Platinum
- 51 new energy projects planned for FY19 through FY21
- New Energy Performance Contracting vehicle to be issued in FY19
- "Work Green" engagement pilot to encourage sustainable behaviors by facility occupants and employees, expandable to County and agencies
- Replaced all county-owned traffic signals with LED signals
- Upgraded 4,900 lighting fixtures in County parking garages to LED
- Retrofitting 26,000 County-owned streetlights with LED lights

Opportunities for:

- Pursuing LED streetlights for utility-owned streetlights

Building Sector's Sources of GHG Emissions



Source: MWCOG Montgomery County GHG Inventory

Distributed and Renewable Energy Initiatives for the Private Sector

Implemented / In process:

- Expedited rooftop solar permitting and reduced permit fees for residential rooftop solar
- Permitting solar fields as accessory uses and zoning text amendments that reduce setbacks for solar
- Advocating for state legislation that supports long-term expansion of community solar.

Opportunities for:

- Convening work group to ensure County's laws and policies encourage, and do not provide barriers to, the implementation of solar PV, including community solar and battery storage, and geoexchange systems

Distributed and Renewable Energy Initiatives for County Facilities

Implemented / In process:

- Microgrids at Public Safety Headquarters and County Correctional Facility
- 17 solar projects totaling 7.6 MW
- Purchased 100% wind energy and additional clean energy RECs to offset fuel and energy consumption
- Installed solar powered on-street parking meters in all county parking lots
- Installed solar powered lights at 42 Ride-On bus shelters
- Installing solar powered school and pedestrian flashers
- Surveyed all County-owned sites and identified possible solar sites, including surface parking lots, building roofs and solar pole lights

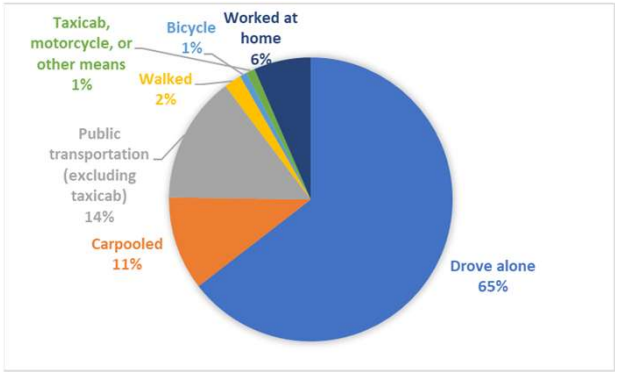
Opportunities for:

- Planning Oaks Landfill solar project; future potential for Gude Landfill
- Exploring more opportunities for microgrids in County facilities or under Public-Private initiatives
- Exploring installation of solar panels on county parking facilities
- County Government criteria and standards for net zero and resilient facilities

Transportation

41% of emissions

HOW WE TRAVEL TO WORK:



OF VEHICLES REGISTERED: **800,392**

OF COUNTY FLEET VEHICLES: **3,342**

HYBRIDS, EVs, & PLUG-IN HYBRID ELECTRIC CARS:

3% OF ALL VEHICLES

Sources (clockwise f/ top right): MD Motor Vehicle Administration 2017 annual report; DGS FY2017 annual report; DEP 2017 Office of Sustainability Annual Report; US Census Bureau American Community Survey 2017 Table S0801.

Transportation Initiatives

Implemented / In process:

- Ride On, Ride On ExtRa, Kids Ride Free, Seniors Ride Free
- FLASH bus service on Route 29 starting in 2020.
- Ride On Flex microtransit pilot
- Bus Rapid Transit Planning for: MD 355, New Hampshire Avenue, North Bethesda Transitway, Corridor Cities Transitway
- Implementing the Bicycle Master Plan through new bicycle infrastructure, including separated bike lanes.
- Building new sidewalks and ADA ramps
- Bike/Pedestrian Safety Initiative, Vision Zero and Safe Routes to Schools Green Street and low-impact design principles implemented into transportation projects

Opportunities for:

- Implementation of NextGen Transit Demand Management legislation
- Encouraging employers to expand telework options

Electric Vehicle Initiatives for the Private Sector

Implemented / In process:

- Installed 32 electric vehicle charging stations in County garages
- Expedited permitting process for electric vehicle charging stations
- Reduced fees for residential EV permits
- New program for utility incentives/rebates for private charging stations and utility owned/operated chargers in public spaces.

Opportunities for:

- Convening a multi-department team, with community and industry stakeholders, to develop a comprehensive strategy for expansion of EV use and implementation of charging infrastructure (e.g., charging in the ROW) and has already been in conversations with Pepco about this.
- Developing EV and charging infrastructure buying co-ops or other programs to expand the use of electric vehicles.

Electric Vehicle Initiatives for County Government Fleet

Implemented / In process:

- Purchased 39 battery electric and 193 hybrid fleet vehicles
- Purchasing the County's first 14 zero-emissions electric buses and charging stations

Opportunities for:

- Improved infrastructure at County Depots to support growth in EV bus fleet
- Reducing the County fleet via right-sizing, expanded motor pooling, and virtual meeting options
- Expanding electric vehicles and charging infrastructure for County fleet and employee use

Climate Planning & Coordination

- Climate leadership meetings of county departments
- Plans for more public engagement—including climate advisory opportunities
- Build on previous climate planning efforts– need a roadmap of prioritized actions.
- Identifying resources to prioritize planning and implementation efforts.
- Climate website under development

Micro-Actions You Can Take

- Live car-free if you can
- Buy green energy for your home
- Make your home more energy efficient
- Walk and bike more, drive less, and use more public transportation
- Eat more plants and less meat
- Replace gas-powered car with electric vehicle

… and encourage your friends and family to do the same!

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