



Metropolitan Washington Council of Governments

22 JURISDICTIONS 5+ MILLION PEOPLE 300 ELECTED OFFICIALS

COG's
Multi-Sector Working Group
Energy/Built Environment Subgroup

Climate, Energy & Environment Policy Committee
Metropolitan Washington Council of Governments
March 25, 2015

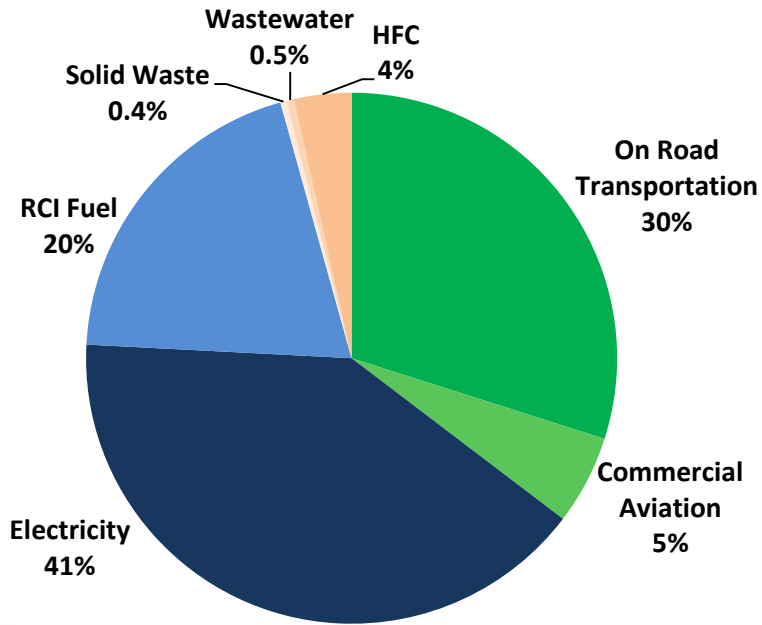
Schedule Update

- February- August
 - MSWG and Subgroups
 - Energy/Built Environment, Transportation, Land Use
 - Consultant support procurement – ICF
 - Public input
 - ACPAC, TPB CAC, Web-based
 - Consultation with COG Board, TPB, MWAQC, CEEPC, Region Forward
- September
 - Interim Report to COG Board, TPB, MWAQC, CEEPC, Region Forward
- October - December
 - Public input
 - Draft Final Report to TPB, MWAQC, CEEPC, Region Forward
- January 2016
 - Final report to COG Board

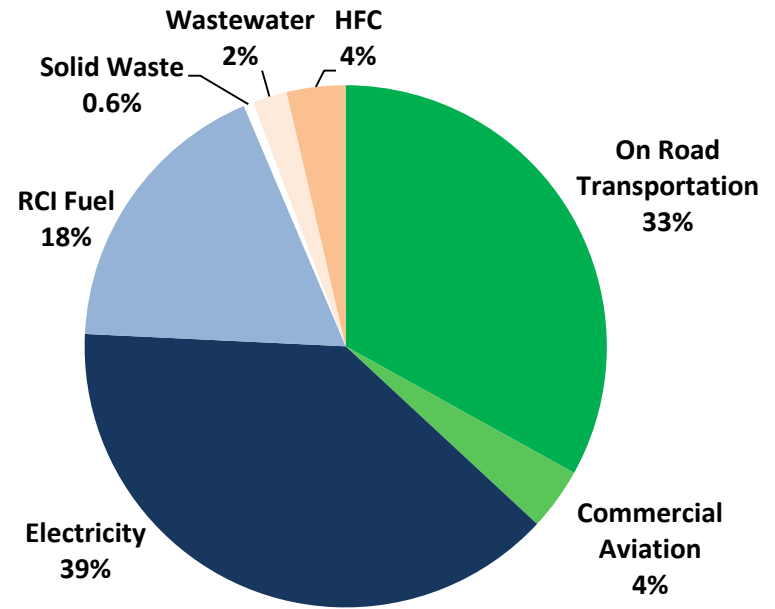


NCR Greenhouse Gas Inventory

2005 Revised GHG Inventory
National Capital Region
MWCOG
74.02 MMtCO₂e
16.02 MtCO₂e/capita



2012 Preliminary GHG Inventory
National Capital Region
MWCOG
69.88 MMtCO₂e
13.30 MtCO₂e/capita



Note: Due to differences in methodologies, 2005 and 2012 inventories are not directly comparable.

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NCR Greenhouse Gas Inventory

National Capital Region Greenhouse Gas Inventory - MWCOG				
Source	2005 Revised		2012 Preliminary	
	MMT CO ₂ e	Percent of Total	MMT CO ₂ e	Percent of Total
On Road Transportation	22.14	30%	23.10	33%
Commercial Airline	4.02	5%	2.69	4%
Electricity	29.96	40%	27.15	39%
RCI Fuel	14.70	20%	12.48	18%
Solid Waste	0.28	0.4%	0.42	0.6%
Wastewater Treatment	0.34	0.5%	1.50	2%
Hydrofluorocarbons (HFC)	2.58	3%	2.54	4%
Total (Gross Emissions)	74.02	100%	69.88	100%
Per Capita GHG Emissions	16.02		13.30	



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NCR Greenhouse Gas Inventory

2005 & 2012 Greenhouse Gas Inventory Methodologies

Source	2005 General Methodology	2012 General Methodology
On Road Transportation	Moves 2010a; 2014 CLRP; TPB Travel Demand Model v 2.3.57	Moves 2010a; 2014 CLRP; TPB Travel Demand Model v 2.3.57
Commercial Aviation	Total US commercial aviation from EPA US GHG Inventory scaled to region based on Bureau of Transportation Statistics miles for all arriving and departing flights divided by two	Total US commercial aviation from EPA US GHG Inventory scaled to region based on Bureau of Transportation Statistics passenger miles for all arriving passengers scaled to the region by % trips originating in the region
Electrical	Emissions from regional power plants (EPA) plus emissions from electric imports (EPA regional emission factor)	Total electrical consumption times emission factors for eGrid zones covering Maryland/DC and Virginia



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NCR Greenhouse Gas Inventory

2005 & 2012 Greenhouse Gas Inventory Methodologies

Source	2005 General Methodology	2012 General Methodology
RCI Fuel	Total natural gas, distillate and residual fuel oil from US DOE, EIA, scaled to the region by population plus non-road emissions from EPA calculation tool	Total natural gas, distillate and residual fuel oil from US DOE, EIA, scaled to the region by households for residential and population for commercial and industrial plus non-road emissions from EPA tool
Solid Waste	US EPA waste GHG emission calculator	US EPA waste GHG emission calculator
Wastewater	EPA State Inventory Tool, IPCC formulas, default inputs, by population	ICLEI Wastewater emissions estimation tool based on treatment technology and population
HFC	Total US HFC emissions from EPA US GHG Inventory scaled to region by employment	Total US HFC emissions from EPA US GHG Inventory scaled to region by population

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Strategies

- Hierarchy
 - Strategy – by major category
 - Implementation Actions
 - Tools
 - Co-Benefits
-
- Land Use Strategies
 - Environment & Conservation
 - Land Use Planning Coordination
 - Development Patterns
 - Site Planning & Buildings
 - Joint Actions
 - Tree Canopy; Ecodistricts; Renewable Barriers; DE/Microgrids/CHP; Natural gas service expansion

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Strategies

- Transportation
 - Fuel Efficiency / Low Carbon Fuels
 - System & Operational Efficiency
 - Reduce VMT and Vehicle Trips
 - Other
- Joint Actions
 - Tree Canopy; EV infrastructure; Building retrofits; Mixes of land uses; Urban design/accessibility in suburban & rural areas



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Strategies

- Energy/Built Environment
 - Existing Buildings
 - 2% per year (30%) energy & water consumption reduction through 2030
 - Location Efficiency
 - 10% increase residential & commercial development rate in activity centers by 2030
 - New Buildings
 - 100% buildings are net zero by 2050
 - 100% buildings are Energy STAR by 2030
 - 50% buildings are net zero by 2040
 - 100% use of WaterSense fixtures by 2030
 - 100% compliance with current IGCC energy codes by 2020



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Strategies

- Energy/Built Environment
 - Public & Private Infrastructure
 - 1% per year (35%) reduction in infrastructure based energy use by 2050
 - Energy Source & Supply
 - 30% reduction in GHG emissions from power plants by 2030
 - 20% reduction in natural gas distribution system leakage by 2030
 - Resource Recovery, Conservation & Management
 - Net-zero waste by 2050
 - Off-road equipment
 - 2% per year (30%) reduction in GHG from off-road equipment by 2030
 - Awareness & Education
 - Move to action (measurable results) through community engagement



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