An aerial photograph of Nashville, Tennessee, showing the city skyline with various skyscrapers and buildings. The Nashville River is visible in the foreground, with the White Bridge crossing it. The image is framed by a white border.

Mayor Cooper's
**SUSTAINABILITY
ADVISORY COMMITTEE
REPORT** on Metropolitan
Government of Nashville and
Davidson County's Climate Change
Mitigation Action Plan

2021

Mayor's Sustainability Advisory Committee

January 25, 2021

Linda Breggin
Eric Kopstain
Co-Chairs



BACKGROUND

Mayor Cooper signed Global Covenant of Mayors Agreement—the world’s largest cooperative effort among mayors & cities to reduce greenhouse-gas emissions, track progress, and prepare for climate-change impacts. Obligates Nashville to:

- 1) inventory both municipal and community-scale greenhouse-gas emissions on a recurring basis;
- 2) establish reduction targets to mitigate carbon pollution identified in those inventories;
- 3) track progress toward achieving those targets; and
- 4) develop plan for Nashville to adapt to a warming climate.

Consistent with and complimentary to national efforts.

NASHVILLE GCOM COMPLIANCE – 2020

Mitigation Badge

Awarded as soon as one of the steps (i.e. Inventory, Target, or Plan) is accomplished



Inventory



GHG baseline emissions inventory submitted and validated (including all mandatory criteria)

Target



GHG emissions reduction/low emissions development target set and validated

Plan



Separate or integrated climate action plan for climate change mitigation submitted and validated

Adaptation Badge

Awarded as soon as one of the steps (i.e. Assessment, Goal, or Plan) is accomplished



Assessment



Climate risk & vulnerability assessment (RVA) submitted and validated

Goal



Goal(s) for climate change adaptation goal(s) submitted and validated

Plan

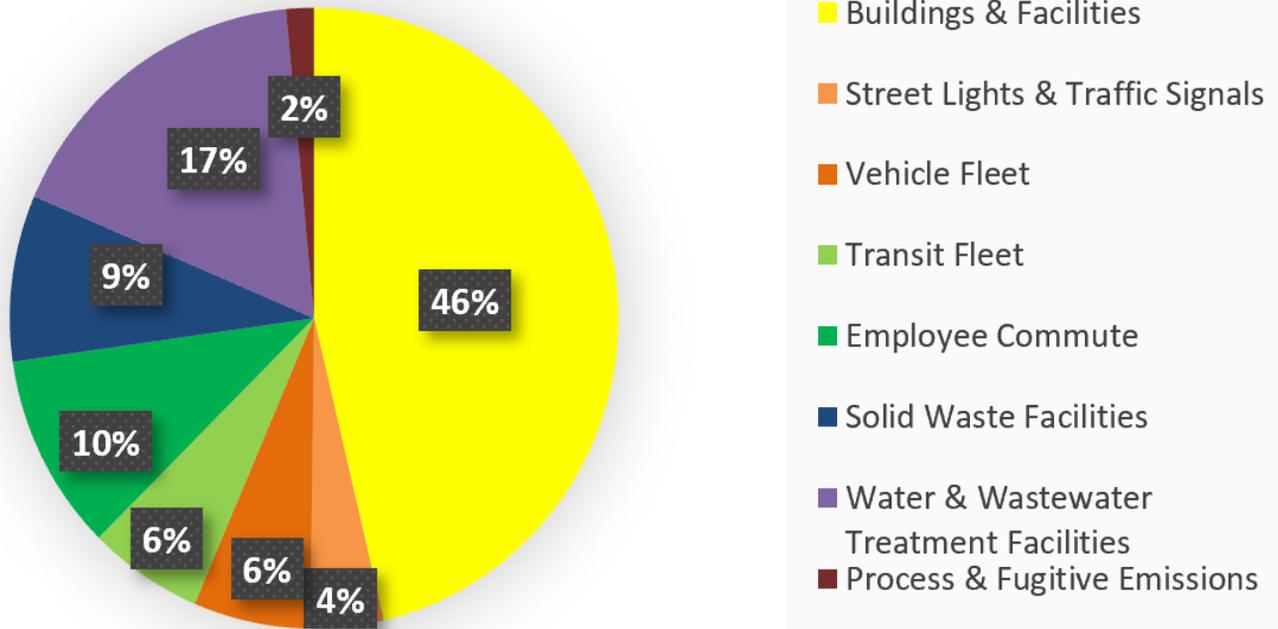


Separate or integrated climate action plan for climate change adaptation submitted and validated

★ The Sustainability Advisory Committee recommends Nashville’s Climate Action Plan be oriented around adopted targets of greenhouse-gas emissions reductions—for both Metro Government and the community at-large (Davidson Co.)—of **80 percent by 2050** (“80 by 50”) from a 2014 baseline.

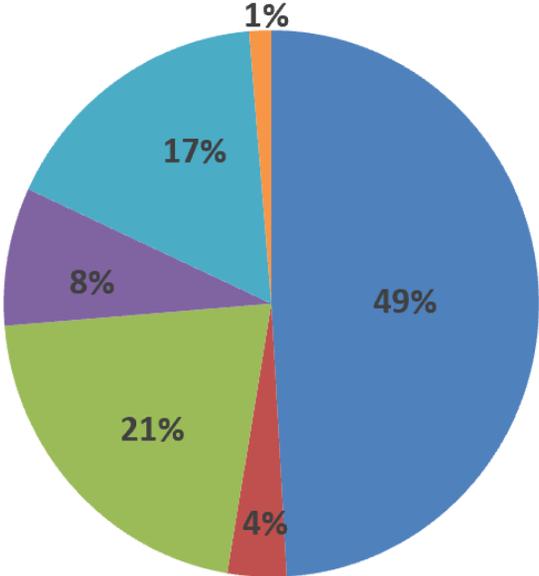
SNAPSHOT: METRO GOV'T CO₂

2017 Municipal GHG Inventory



SNAPSHOT: COMMUNITY-SCALE CO₂

Nashville 2017 Emissions



■ Transportation ■ Solid Waste ■ Commercial ■ Industrial ■ Residential ■ Fugitive Emissions

MAYOR JOHN COOPER

Opening Remarks



SAC CO-CHAIRS' INTRODUCTION

- Acknowledgements
- Involvement of Mayor's Youth Council
- Committee process and objectives

REPORT OVERVIEW



OVERARCHING ISSUES

- Co-benefits
 - Improved public health
 - Economic development
 - Job creation/economic inclusion
 - Equity
- Environmental equity
- Leadership initiatives

KEY CO₂ MITIGATION ACTIONS

(“Forks in the Road” and Lock-in Effects)

- Decarbonization of the electrical grid
- Electrification of municipal and community vehicle fleets
- Building energy use (electrification & energy-efficiency)
- Decreased vehicle miles traveled (*sizable* mode shift from SOVs to walk/bike/transit/telecommute)

Sustainability Advisory Committee recommendations for climate *mitigation* strategy are organized around the 5 most impactful sectors.



Green Buildings



Waste



Energy



Mobility



Natural Resources

1.

NATURAL RESOURCES SUBCOMMITTEE



Natural Resources

Vision: Ensure Nashville remains sustainable by providing residents access to clean water, clean air, and open space—for their physical, spiritual, mental health.

Target: Increase Nashville's resilience to a changing climate and mitigate heat and flood risks, especially in vulnerable populations.

Policy Focus Areas

Restore Natural Functions of the Landscape by Reclaiming Major Industrial Land Uses for Open and Green Space

Restore Natural Functions of the Landscape to Improve Water Quality, Save Money, and Improve Resiliency to Climate Risks

Creatively Use Public Land for Food Production, Climate Resiliency, Flood Mitigation, Wildlife Habitat, and Recreation

Conserve, Sustainably Manage Public & Private Lands throughout Davidson County

Priority Actions

- 1) **Convene a working group to develop diverse funding mechanisms to implement *Plan to Play*.**
- 2) Retrofit 10% of impervious surface on Metro-owned land. Surfaces built before storm-water regulations (e.g. parking lot aisles around Nissan Stadium).
- 3) Convert 450 acres of turf to historic grasslands.
- 4) **Reimagine Nashville's downtown flood mitigation strategies on the East bank** of Cumberland River into a multi-functional public open space.
- 5) Work with TDOT to cap I-40 (convert to a tunnel, so the top of the tunnel can be used for another land use) to restore connectivity to North Nashville and provide needed open/green space downtown.



Leadership initiative: Convene Nashvillians, environmentalists, public health experts and urban planners to plan Nashville's next downtown open space.



Equity: Provide access to parks, clean air and clean waters and affordable housing to families who have made their home in the urban core.



Lock-In Effects to Avoid: Increasing cost of real estate diminishes our ability to acquire public land for livability.

ADDITIONAL NEAR-TERM RECOMMENDATIONS

- Develop a **countywide strategy for green infrastructure** investments. As part of this project, deliver a **5-year shortlist** of green infrastructure projects.
- Complete a **turf-to-grasslands conversion** project (450-acre goal).
- Convene a multi-departmental or stakeholder workgroup to implement *Play To Play*-recommended **diversification of funding streams for Metro Parks**.
- Pilot a **“pavement to park” project**, converting surface parking or vacant asphalt into parklet/pocket park (‘de-pave’ = impervious to pervious surface).
- Work with Parks Board and MNPS Board to adopt a countywide Ombudsman or umbrella **Joint/Shared Use Agreement**.
- Work with Council on an **ordinance to enable farming leases** for appropriate portions of parkland, while also pursuing any other needed Code revisions to better **support urban agriculture** on privately-held land.
- Reorganize/update **Tree & Landscape Code** to: prioritize canopy preservation, align tree-density goals w/land uses, increase tree-preservation requirements.

2.
ENERGY
SUBCOMMITTEE



Energy

Vision: Transition to a clean economy through green jobs and training, renewable power, and energy efficiency to save resources, improve the health and wellbeing of the community, and ensure Nashville is a green, equitable place to live.

Targets: Achieve 80% reduction in community-wide and Metro CO2 emissions by 2050.

Priority Actions

Policy Focus Areas

Scale up Local Renewables

Reduce Energy Consumption from Non-Building Assets

Increase Transparency in Electricity Billing and Energy Composition System

- 1) Support deployment of behind-the-meter solar on Metro buildings, quasi-governmental agencies, wider community wherever possible.
- 2) Set community-wide RPS goal of 100% carbon-free electricity by 2041 (or date to be determined), similar to BL2019-1600 for Metro.
- 3) Encourage the 100 largest energy users in the City to report energy use, improve building efficiency, increase their use of renewables.
- 4) Offer net-metering to commercial, industrial, residential customers, and set interim goals such as 20% solar deployment by 2035.
- 5) Negotiate with TVA to increase the 5% flex provision for renewables.
- 6) Encourage NES to build a large-scale solar array to serve the community's energy needs like Knoxville Utilities Board has done.
- 7) Encourage NES to grow weatherization/efficiency improvements and education for low-income households (Home Energy Uplift).



Leadership Initiative: Organize a meeting with businesses and universities to ask for specific commitments to renewable power, leading to a permanent sustainability roundtable.



Equity: Support the launch of an Opt-Out Round-Up donation program (RS 2018-1508) which provides that NES customer bills be rounded up to the nearest dollar amount—with funds collected promoting energy-efficiency for low-income residents (Home Energy Uplift). Utilize the Equal Business Opportunity Law (BL2018-1419) to enhance workforce-development training for underserved communities.



Lock-in Effects to Avoid: Failure to act boldly and quickly to decarbonize the grid will preclude City's achieving its targets.

ADDITIONAL NEAR-TERM RECOMMENDATIONS

- Encourage Electric Power Board and/or Council to adopt *community* goal of 100% carbon-free electricity – to include **utility-scale solar in NES fuel mix** (comparable to Knoxville Utilities Board’s 502 MW).
- Urge NES/TVA to offer a process or program for customer access to **net-metering**.
- Assess/deploy **behind-the-meter solar** where feasible on/at Metro facilities.
- **Incentivize solar installs** (and green buildings / adaptive reuse of historic) by streamlining permitting, zoning, inspection etc. at Development Services.
- Improve **governance transparency** of NES Electric Power Board; appoint EPB members with backgrounds in sustainability; consider Metro charter tweaks to enhance municipal ties to / oversight authority of NES.

3.

GREEN BUILDINGS
SUBCOMMITTEE



Green Buildings

Vision: A future in which the electricity serving Nashville’s built environment is renewable and carbon-free, and Nashville’s buildings are energy-efficient. Achieve these improvements in a way that benefits marginalized communities.

Targets: Reduce Metro & community emissions from building sector 80% by 2050.

Policy Focus Areas

Decarbonize the TVA Grid by 2035

Electrify the Building Sector

Improve Efficiency of Metro, Residential, Commercial, Institutional Buildings

Strengthen Energy Codes & Compliance

Priority Actions

- 1) **Amend Metro charter to give Metro more control over NES and leverage NES’s negotiating power to decarbonize TVA grid.** Allows for oversight/accountability to help achieve carbon reduction and enhance energy-efficiency access and affordable renewable power.
- 2) **Establish a mandatory energy benchmarking and reporting program for commercial buildings.** Drive innovation that results in energy-efficient commercial buildings as well as develops building-sector carbon targets.
- 3) **Update the energy code every three years** until we reach **net zero for new buildings in 2030.** **Update and enforce energy codes frequently** to, among other objectives, advance building electrification.



Leadership initiatives: Collaborate with large-city mayors in TVA territory on urging new Congress and President to appoint climate-conscious leaders to TVA board; and to grow clean power in TVA fuel mix while enabling LPC innovation on renewables. Convene industry roundtable to share best practices on energy management for commercial buildings.



Equity: Support expansion of investment in NES Home Energy Uplift program, which provides energy-efficiency retrofits for low-income households; Support expansion of Building Futures, a TVA-Urban League partnership that provides training and certification for minority contractors.



Lock-in-Effects to Avoid: Failure to require regular updates to energy code (locks in inefficient building stock for decades); Failure to restructure relationship of Metro and NES to ensure coordinated effort to achieve carbon goals.

ADDITIONAL NEAR-TERM RECOMMENDATIONS

- Initiate participation in U.S. Department of Energy **Better Buildings Challenge**:
 - ✓ Begin with Metro General Government facilities (establish '**Energy Savings Revolving Fund**' and consolidate Metro **Departments' MEP under General Services**);
 - ✓ Have General Services design/construct all new buildings for General Government and encourage **DGS Design Guidelines be adopted** by quasi-Metro agencies;
 - ✓ Require all agencies **report their energy use/GHG to Council** during budget season;
 - ✓ **Encourage City's 100 largest energy users** to report their energy use (voluntary benchmarking program), improve building efficiency, increase use of renewables.
- Work with Council on **legislation committing to a review/update of Energy Code** every 3 years. Require Codes Dept. produce bi-annual **reports on implementation**.
- Identify/fund '**Net Zero Energy**' facility to be built by General Services within 3 years.
- Support launch of Opt-Out Round-Up program (RS 2018-1508) for Home Energy Uplift (*encourage NES Board to regularly inquire into **more funds for NES Home Energy Uplift***).
- **MDHA board adopt LEED** policy; expand **funds for MDHA HVAC** replacement program.

4.

WASTE REDUCTION & RECYCLING SUBCOMMITTEE



Waste Reduction

Vision: Create a long-term Solid Waste Master Plan with the ultimate goal of eventually achieving zero waste to landfill.

Targets: Zero waste (90% diversion or more) by the year 2050.

Policy Focus

Centralized Waste Management

Residential Recycling Strategies

Commercial Recycling Strategies

Food Waste Reduction

Priority Actions

- 1) **Establish a Solid Waste Authority.** **Create a separate funding stream for waste management** to boost accountability for achieving goals in Metro's Zero Waste Master Plan.
- 2) **Implement Save-as-You-Throw (SAYT) policies.** Require residents and businesses to pay only for the amount of trash they're sending to landfills and ensure lower (or no) costs for those who recycle and compost.
- 3) **Support a Metro Council ordinance that mandates a C&D Recycling Deposit System and the siting of a C&D transfer and recycling facility in Davidson County.**
- 4) **Phase in a food waste ban** that prohibits food scraps from trash collection—starting with large generators, then medium to small producers, and finally residents (once curbside organics collection is established).
- 5) **Enforce current bans (yard waste, electronics, cardboard).**



Leadership Initiatives: Bring together business leaders to ask how they plan to contribute to the success of the Zero Waste Master Plan; Convene stakeholders to explore reigniting future local recycling industries.



Equity: The SAYT pricing structure should minimize disproportionate financial impact on low-income communities and avoid incentivizing illegal dumping. Disproportionate impacts of other actions such as multifamily recycling should be considered.



Lock-in effects to avoid: Laws, rules, or contracts that penalize the reduction/diversion of waste sent to landfills or other facilities that hinder the City's ability to meet its carbon reduction and zero waste goals, such as a waste-to-energy facilities.

ADDITIONAL NEAR-TERM RECOMMENDATIONS

- Institute a **fee structure**, detached from General Fund, as interim step toward **establishing a Solid Waste Enterprise Fund** or Authority—a cornerstone of *Achieving Zero Waste*.
- To help reach countywide goal of cutting food-waste sent to landfill *in half* by 2030, issue a **mayoral Executive Order** requiring Metro departments/agencies to develop **food-waste reduction** strategies, projects, and programs.
- Adopt a **procurement policy** requiring Metro departments and agencies to **purchase compost** for use in public landscaping projects, when feasible/affordable.
- Require applications for **Construction & Demolition permits to attach a plan** for the waste & recycling of material generated on property (per Metro Code 16.28.040 D).
- Launch **Every-Other-Week Recycling service** for Metro’s curbside program.
- ✓ With a SW Enterprise Fund in place and post- successful launch of EOW, eventually seek to further maximize personnel and equipment to also launch **weekly organics collection** at the curb (similar to Austin TX).

5.

MOBILITY SUBCOMMITTEE



Mobility

Vision: Increase the quality, availability, and safety of transportation options for cleaner air, healthier commutes, and better access to jobs and opportunities.

Targets: Reduce Metro's Vehicle Miles Traveled (VMT) by 40% by 2050 and increase Electric Vehicle (EV) adoption rate up to 40% by 2050.

Policy Focus

Make Multimodal Transportation Safe, Easy, and Attractive, Including the Use of Shared Urban Mobility Devices

Develop and Mandate Comprehensive Transportation Demand Management Policies and Programs

Make Walking and Biking Safe, Convenient, and Appealing

Reduce Emissions from Freight Movement

Invest in Green Vehicles and Transportation Infrastructure

Priority Actions

- 1) Establish a Metro DOT that coordinates multimodal transportation initiatives to make alternatives to driving alone easy, safe, and appealing.
- 2) Work with Council to pass meaningful Transportation Demand Management (TDM) legislation comparable to peer cities.
- 3) Transition the Metro vehicle fleet, including WeGo and MNPS buses, to electric or other low-emission technologies.
- 4) Establish dedicated funding for WeGo and expansion of sidewalks, bikeways, and other non-driving mobility infrastructure.



Leadership initiative: Convene a Metro Affordable Housing and Transportation Taskforce to develop policies that lead to more transit-oriented, compact development and more affordable, transit-accessible housing.



Equity: Develop/use an equity-screening tool in major modal plans to inform infrastructure investment strategy.



Lock-In Effects to Avoid: Establish dedicated funding (lack thereof is causing Metro to fall further behind peer cities); Restrict the purchase of new fossil fuel-powered vehicles; Provide/maintain adequate EV infrastructure.

ADDITIONAL NEAR-TERM RECOMMENDATIONS

- Invest in **neighborhood infrastructure** that supports active transportation.
- Organize Metro Departments and processes to deliver a **more multimodal transportation system**.
- Work with Council to **codify the Green & Complete Streets executive order** and to **enact meaningful TDM policies**.
- Improve safety by **advancing Vision Zero** (incl. an oversight committee to track progress).
- Provide and maintain **critical infrastructure**, including charging stations, to **support electric vehicles**.
- Modernize the **traffic management system** to include a Traffic Operations Center.

COMMITTEE NEXT STEPS

POSSIBLE SAC NEXT-STEPS

- Facilitate awareness of forthcoming SAC recommendations on **Climate Adaptation and Resilience**.
- Advise/engage on Metro Climate Action Plan. Co-host public **education and outreach convenings** (guest speakers from Nashville and peer cities leading on sustainability).
- Support **MNPS initiative** to realize energy savings from their buildings.
- Engage Mayor's newly-convened Affordable Housing Taskforce on **coordination/alignment with Green Buildings'** recommendations for MDHA/multifamily/other lower-income housing stock.
- Help implement specific projects/policy changes in recommendations:
 - A **leadership initiative** with the business and/or philanthropic communities to support Climate Action Plan implementation; or
 - A Vanderbilt-led, citywide leadership initiative with **area colleges and universities** for **collective impact** on carbon.

THANK YOU

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