# MCDOT & MCTS GHG Reduction Plans

**City-County Advisory Board on Climate and Economic Equity**

**July 16, 2025**

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Office of Sustainability

DAS - Facilities Management

MILWAUKEE COUNTY

# Milwaukee County Department of Transportation & Milwaukee County Transit System

*The following section references pages 36 – 49 (Department Specific GHG Reduction Plans) of the Milwaukee County Climate Action 2050 Plan.*

*Ref: File No. 25-262*

MILWAUKEE COUNTY

# Milwaukee County Department of Transportation

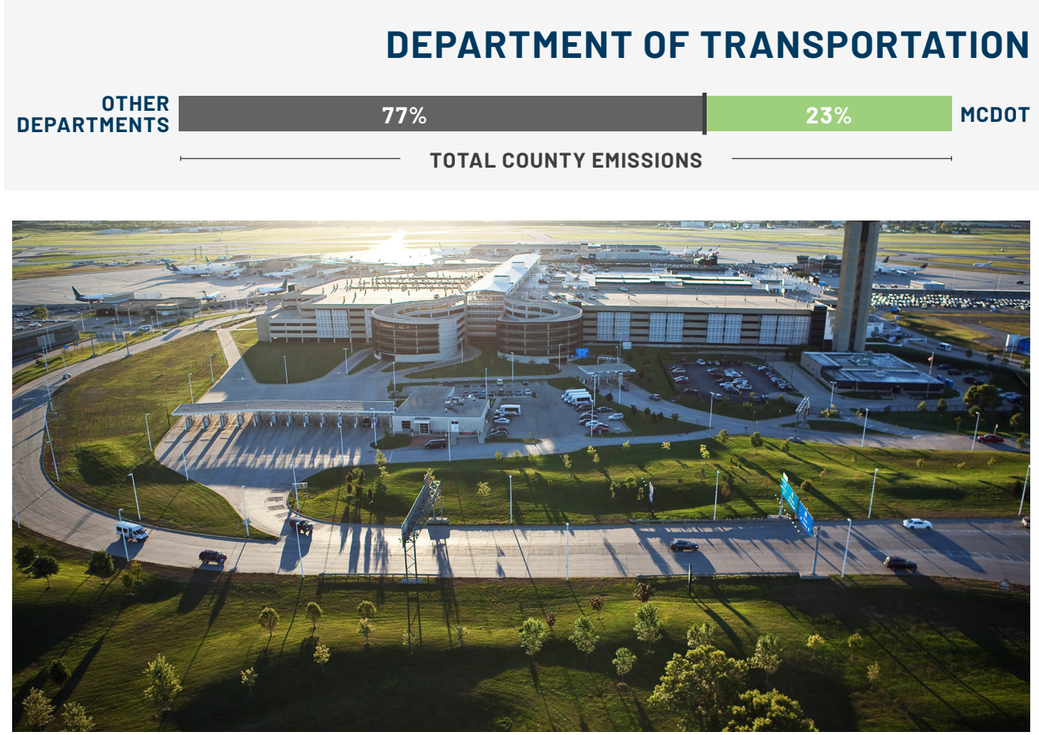
The Milwaukee County Department of Transportation (MCDOT) develops and maintains Milwaukee County's infrastructure needs based on the diverse talent and qualifications of its staff. There are six divisions: Airport, Highway Maintenance, Fleet Management, Transit/ Paratransit System, Transportation Services and Director's Office. The Director and Deputy Director of Transportation oversee the day-to-day function of the department[8].

The MCDOT provides fleet services to other departments within Milwaukee County, including Health and Human Services, the Airport, the Sheriff's Office, and others.

## FACILITIES OVERVIEW

MCDOT operates 4 energy-consuming facilities, totaling 5,256,982 sq. ft. throughout the County. This includes Milwaukee Mitchell International Airport (MMIA) and Timmerman Field. For MMIA and Timmerman Field, the utility data provided included total utility values for the entire site, rather than on a per-building basis.

| BUILDING TYPE | # OF BUILDINGS | TOTAL SQ. FT. | BUILDING GROUP AVERAGE EUI | ASHRAE 100 EUI GOAL |
|---|---|---|---|---|
| Airport | 2 | 4,947,613 | 35.2 | - |
| Mixed-use Office | 1 | 301,626 | 45.1 | 35 |
| Vehicle Service | 1 | 34,499 | 75.4 | 57 |






## FLEET OVERVIEW

The MCDOT manages more than 1,100 active on-road and off-road assets that traveled more than 4 million miles in 2024. The on-road assets consist of 14% passenger vehicles, 39% SUVs and pickup trucks, 19% heavy trucks, 18% off-road construction equipment, and 9% off-road agricultural and other equipment.

Vehicles average 20 miles per day of distance traveled, which makes electrification a good fit for a large portion of user needs. Passenger vehicles are candidates for immediate and cost-effective electrification, as are a large share of the SUVs and pickup trucks. There are only a handful of suitable options for electrification of Heavy Trucks and Off-Road Equipment.

[8]https://county.milwaukee.gov/EN/Our-County/Departments--Divisions/All-Departments

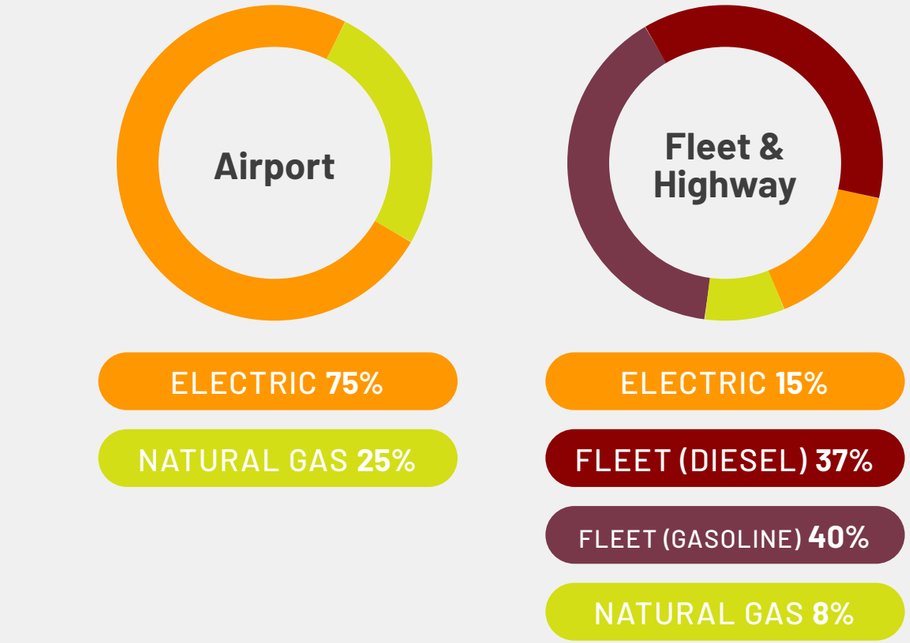
# 7 | DEPARTMENT-SPECIFIC GHG REDUCTION PLANS



## DEPARTMENT GHG INFORMATION

The Department of Transportation makes up 23% of the overall County emissions. Airport operations consist of 15% of the County's overall emissions and MCDOT Fleet & Highway division make up 8%. Note that below breakdown uses the 2022 vehicle fleet emissions value as 2023 data was not available.

### MCDOT Emissions Breakdown




### Recent Sustainability Initiatives

MCDOT has completed several successful sustainability initiatives to decrease their emissions and increase energy efficiency and resiliency.

#### AIRPORT

**Passenger Shuttles:** Shuttle buses operate using compressed natural gas, which offers more efficient operation than gas or diesel shuttles.

**Consolidation:** Revised operations from three concourses to two to reduce energy and streamline operations.

**Sustainable Materials**: Used recycled concrete for recent runway rehabilitation.

**Water Efficiency:** Low flow fixtures in bathrooms and bottle filling stations.

**LED Lighting:** Majority of outdoor and indoor lighting are LED.

**Efficient HVAC:** Systems are on a centralized control system and have efficient control sequences.

#### FLEET & HIGHWAY

**Anti-Idling Controls:** Many fleet vehicles are equipped with technology to minimize idling while still providing necessary comfort levels for occupants, reducing fuel consumption when vehicles are parked.

**Hybrid Vehicles:** Throughout all fleet segments, MCDOT has worked with departmental teams to deploy approximately 150 hybrid sedans with higher fuel efficiency compared to traditional drivetrain vehicles.

**Electric Vehicle Pilot:** Commenced testing the first battery electric vehicles in the fleet, including a vehicle in use with the Sheriff's Office.

**High Performance Buildings:** Headquarters building is a high-performance building with LED lighting, energy efficient envelope and HVAC systems, and digital building controls.

### Project Development Considerations

Decarbonization projects were developed through a combination of detailed energy and building data analysis as well as collaboration with department staff. The analysis included review of data for utilities (energy), emissions, the latest Facility Condition Assessment Program (FCAP), and MMIA's 2018 Sustainability Management Plan and 2024 Plan Update. Department staff provided further insights regarding past sustainability efforts, potential projects, and cross-departmental engagement opportunities. Additionally, the staff had the opportunity to review and provide feedback on recommended projects and progress milestones.

Note that project types, phasing, savings, and costs are based on the best information currently available. Periodic updates are recommended to keep that plan current and relevant as technology and department operations evolve.

# Overview of Recommended Projects

## BUILDINGS: AIRPORT

**RETRO-COMMISSIONING:** Optimize energy performance of existing building systems (planned throughout airport from 2025-29).

**ENERGY EFFICIENCY:** Continue to update HVAC and control systems to minimize facility energy use.

**BUILDING ELECTRIFICATION:** Eliminate fossil fuel use and replace equipment with electric alternatives. Consider geothermal systems where appropriate.

**ON-SITE SOLAR:** Install PV panels to generate clean electricity. Two sites with a combined size of 2,400 kW were identified during the solar feasibility study. Consider battery storage systems to create a microgrid for increased resiliency.

## BUILDINGS: FLEET & HIGHWAY DEPARTMENT

**RETRO-COMMISSIONING:** Optimize energy performance of existing building systems.

**ENERGY EFFICIENCY:** Despite efficient facilities, continue to upgrade systems with latest technology during replacement. New windows are planned for installation in the maintenance shop.

**BUILDING ELECTRIFICATION:** Eliminate fossil fuel use and replace equipment with electric alternatives. Consider geothermal systems where appropriate.

**ON-SITE SOLAR:** Install PV panels to generate clean electricity. Two sites with a combined size of 500 kW were identified during the solar feasibility study.

# Overview of Recommended Projects

## ON-ROAD VEHICLE FLEET

**FLEET RIGHT-SIZING:** On an annual basis, each department should work with the DOT team to consider opportunities to reduce the number of vehicles supporting their departmental mission. This may be through a shared vehicle model where a motor pool supports a departmental function instead of each user having their own vehicle.

**VEHICLE RIGHT-SIZING:** The Milwaukee County fleet has a substantial quantity of large SUVs (i.e. Chevrolet Tahoe, Dodge Durango) and ¾-Ton pickup trucks (i.e. Chevrolet Silverado 2500, Ford F250) which are not available in hybrid or electric models. Where possible, these vehicles should be evaluated for down-sizing to a mid-sized or compact SUV or sedan; or a ¼-ton or ½-ton pickup truck. Smaller vehicle sizes are inherently less energy intensive and are more likely to be available with a hybrid or battery electric drivetrain.

**FLEET ELECTRIFICATION PILOTS:** MCDOT is beginning its first light duty electric vehicle pilots in 2025 which is commendable. However, the scale and timeline of the pilots is relatively delayed and modest in proportion to the size of the fleet and the emissions reduction ambitions of the department. Sedans and Compact SUVs have a high technology readiness level and generally modest charging needs to support the mileage requirements of most fleet vehicles. MCDOT should find opportunities to aggressively scale the use of electric vehicles in these vehicle classes while taking a more cautious approach to piloting vehicle classes where available electric drivetrain vehicles have a lower technology readiness level (i.e. Police Pursuit Vehicles, Street Sweepers, Heavy Trucks, etc.).

**FLEET ELECTRIFICATION PLANNING:** MCDOT should partner with departmental stakeholders and external consultants as necessary to plan the electrification of the fleet on a decade-long horizon, and update this plan every 2-3 years. Electric vehicles present the opportunity to mitigate emissions and also reduce operating costs for an increasing number of vehicle classes and use cases. However, electric vehicle charging infrastructure requires a multi-year planning timeline to allow for design and construction, potentially including upgrades to electrical services and fire suppression systems where vehicles park indoors. Because the timeline to deploy electric vehicle charging infrastructure is longer than the timeline to procure an electric vehicle, any ambition to deploy electric vehicles without a multi-year plan for charging infrastructure to match is destined to fail.

**ELECTRIC VEHICLE CHARGING INFRASTRUCTURE:** As determined by the Fleet Electrification Planning work, MCDOT may pursue the installation of cost-effective overnight charging where possible, as well as transitory charging throughout the county to support on-route charging needs of municipal vehicles.

**FLEET ELECTRIFICATION:** Built on a robust piloting program and a multi-year plan, electrification of MCDOT's light-duty vehicle fleet is the biggest and most actionable approach to reducing emissions of the vehicle fleet. MCDOT should aggressively pursue this strategy while waiting for other technologies (i.e. low emissions hydrogen, low emissions natural gas) to reach a greater level of maturity and cost competitiveness.

## Overview of Recommended Projects

### OFF-ROAD VEHICLE & EQUIPMENT FLEET

**ELECTRIFICATION OF MOWERS:** Zero Turn mowers are readily available from several manufacturers in battery electric format. MCDOT should evaluate if the multi-hour mowing capabilities of these units can support the requirements of MCDOT teams.

**ELECTRIFICATION OF LIGHT-DUTY CONSTRUCTION EQUIPMENT:** The MCDOT maintains dozens of UTVs, Skid Loaders, Light Towers, and other small construction equipment for which battery electric drivetrain options are readily available from several reputable OEMs. MCDOT should begin piloting these technologies where the duty cycle allows in order to evaluate expansion potential.

**ALTERNATIVE FUELS FOR MOWING TRACTORS AND LOADERS:** The use requirements of a highway mowing tractor or heavy loader used for snow removal are not suitable for replacement with a battery electric drivetrain. However, the emissions of this equipment can be mitigated through the use of R99 drop-in diesel fuel replacement for a portion of the equipment fleet.

**ALTERNATIVE VEGETATION APPROACHES:** While not scalable to every roadway and greenspace, MCDOT may reduce total tractor and mower fuel use and emissions by pursuing alternative vegetation options that do not require regular mowing.

### AIRPORT

| STRATEGY | EMISSIONS REDUCTION POTENTIAL | | COST SAVINGS ($/YR) | COST[1] | PAYBACK (YRS) | RESILIENCY IMPACT | PRIORITY BUILDING(S) | NOTES |
|---|---|---|---|---|---|---|---|---|
| | MTCO2e | % | | | | | | |
| **Retro-commissioning** | 350 | 2% | $80,600 | $1,230,000 | 15.3 | ↑ | Central HVAC Plant (Airport) | All buildings over 10k sq. ft. |
| **Energy Efficiency Upgrades** | 1,390 | 8% | $315,800 | $3,930,000 | 12.4 | ↑ | Parking Structure (Airport) | |
| **Building Electrification** | 1,630 | 9% | -$117,900 | $20,590,000 | – | = | Parking Structure (Airport) | Required to decarbonize heating. |
| **On-Site Solar** | 1,620 | 9% | $433,400 | $11,960,000 | 27.6 | ↑ | Milwaukee Mitchell International Airport (Ground Mount- Fixed) | |
| **Off-Site Carbon-Free Energy[2]** | 12,100 | 68% | $0 | $0 | – | = | N/A | |
| **Carbon Offsets** | 630 | 4% | -$12,600 | $0 | – | = | N/A | Annual expense to cover remaining emissions |
| **TOTAL** | **17,720** | **100%** | **$699,300** | **$37,710,000** | **53.9** | | | |

[1]Cost estimates are for cost premium for decarbonization beyond BAU; excludes grants and incentives; refer to Appendix A for more details
[2]Cost of CFE is shown as $0 based on the assumption that the utility provider meets their sustainability targets by 2050

## FLEET & HIGHWAY DEPARTMENT

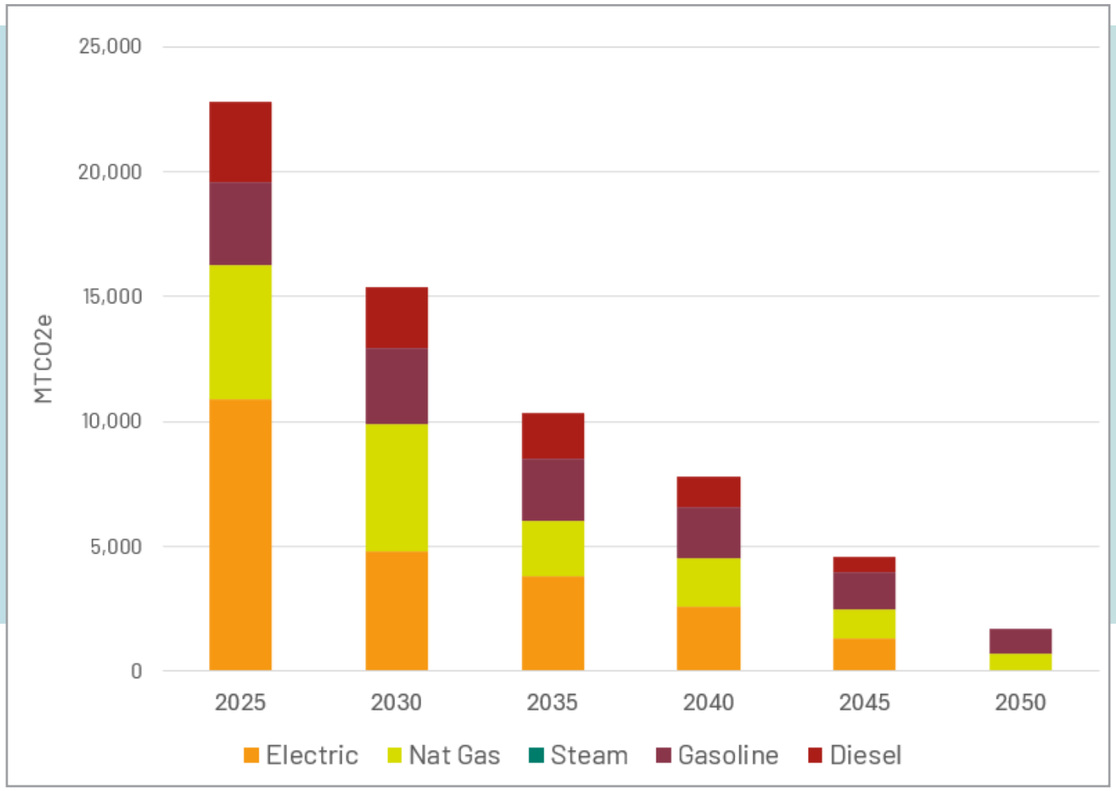
| STRATEGY | EMISSIONS REDUCTION POTENTIAL | | COST SAVINGS ($/YR) | COST[1] | PAYBACK (YRS) | RESILIENCY IMPACT | PRIORITY BUILDING(S) | NOTES |
|---|---|---|---|---|---|---|---|---|
| | MTCO2e | % | | | | | | |
| **Retro-commissioning** | 50 | 1% | $8,700 | $168,000 | 19.3 | ↑ | Fleet Garage & MCDOT HQ | All buildings over 10k sq. ft. |
| **Energy Efficiency Upgrades** | 140 | 2% | $25,200 | $930,000 | 36.9 | ↑ | Highway Shop-North | |
| **Building Electrification** | 210 | 2% | -$15,300 | $5,510,000 | – | = | Highway Shop-North | Required to decarbonize heating. |
| **Fleet Upgrades** | 4,400 | 52% | $472,479 | $13,900,000 | 29.4 | ↑ | Light Duty Vehicles | Includes conversion to EV and renewable fuels |
| **On-Site Solar** | 350 | 4% | $94,300 | $3,100,000 | 32.9 | ↑ | Fleet Garage & MCDOT HQ (Carport) | |
| **Off-Site Carbon-Free Energy[2]** | 2,320 | 27% | $0 | $0 | – | = | N/A | |
| **Carbon Offsets** | 1,060 | 12% | -$21,200 | $0 | – | = | N/A | Annual expense to cover remaining emissions |
| **TOTAL** | **8,530** | **100%** | **$564,179** | **$23,608,000** | **41.8** | | | |

[1]Cost estimates are for cost premium for decarbonization beyond BAU; excludes grants and incentives; refer to Appendix A for more details
[2]Cost of CFE is shown as $0 based on the assumption that the utility provider meets their sustainability targets by 2050

## PATHWAY TO 2050 GOAL

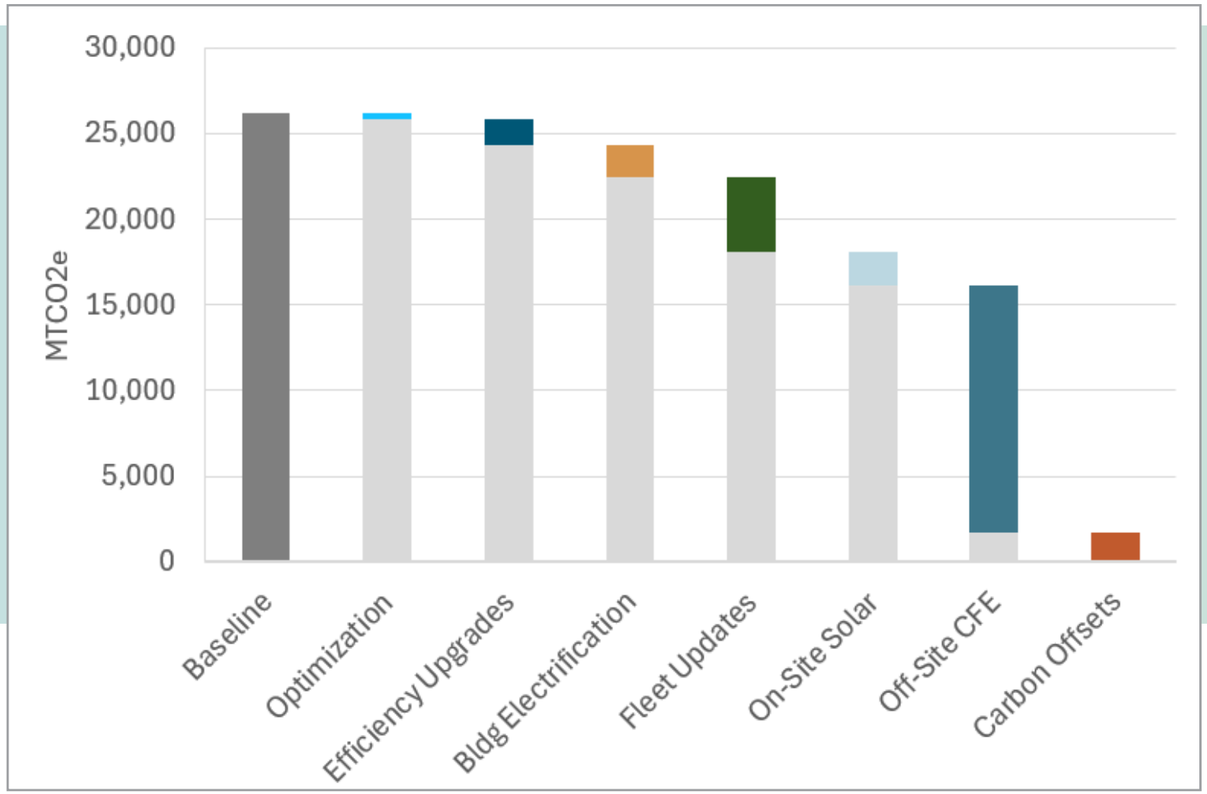
The following figures represent a proposed pathway to achieving decarbonization for MCDOT by 2050.

### Emissions Reduction Over Time




Overall department emissions from 2025 through 2050, including the contribution of each fuel type.

### Emissions Reduction By Project Type

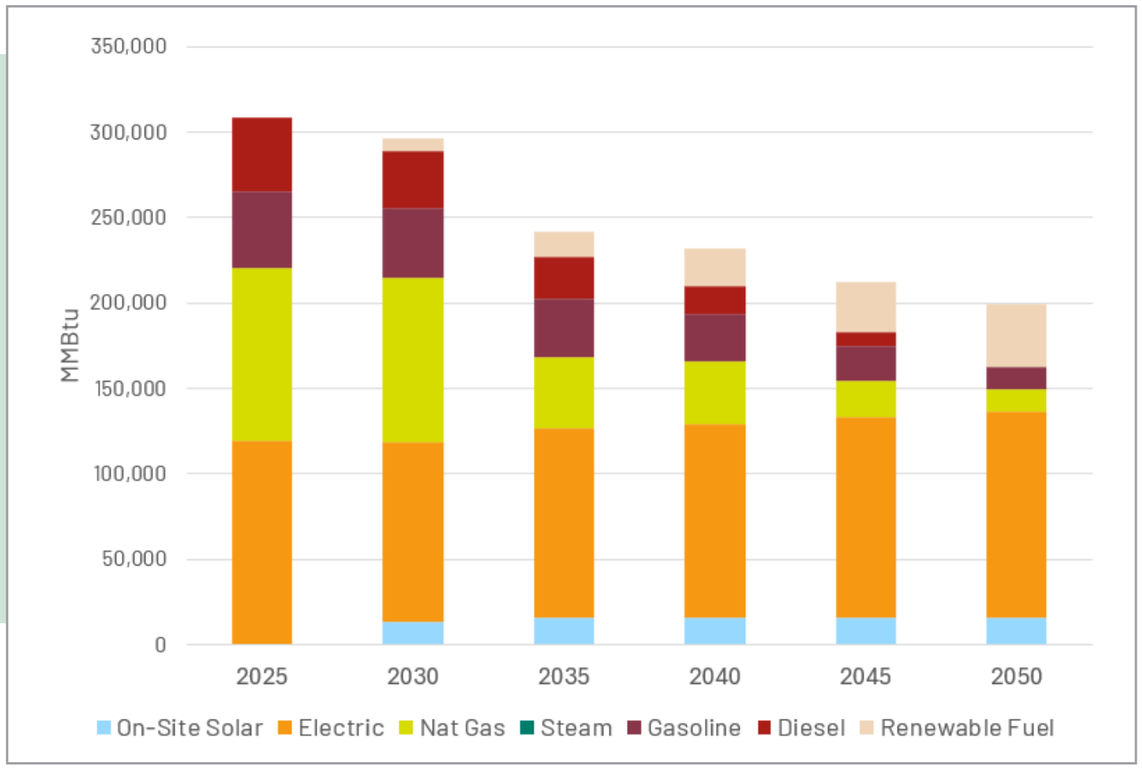



The emissions reduction impact various strategies, listing in order of priority according to the "Impact Hierarchy of Decarbonization" in the "Project Background" section.

## PATHWAY TO 2050 GOAL

The following figures represent a proposed pathway to achieving decarbonization for MCDOT by 2050.

### Energy Use Over Time




Forecasted energy consumption by fuel type, as well as expected production of on-site solar. The goal is first to minimize total energy demand, and secondly to eliminate fossil fuel consumption and source remaining electric with on-site solar, purchased CFE, and carbon offsets (as required).

## Progress **Milestones**

### AIRPORT

#### ENERGY EFFICIENCY

**2028** - RCx buildings over 10k sq. ft.

**2030** - All lighting converted to LED

**2035** - Achieve a department energy reduction of 10% by 2035

#### BUILDING ELECTRIFICATION

**2028 -** Develop long-term plans for electrification of the central HVAC plant.

#### ON-SITE SOLAR

**2035** - Provide 5% of department electric demand through onsite solar

### FLEET & HIGHWAY

#### ENERGY EFFICIENCY

**2030** - All lighting converted to LED

**2035** - Achieve a department energy reduction of 10% by 2035

**2035 -** Eliminate fossil fuel use in 1 building

#### FLEET UPGRADES

**2027** - Develop a year-by-year decarbonization plan for individual fleet vehicles

**2030** - Convert at least 50 light-duty vehicles to electric

#### ON-SITE SOLAR

**2035** - Provide 15% of department electric demand through onsite solar

# Milwaukee County Transit System

The Milwaukee County Transit System (MCTS) is innovating the way people across southeast Wisconsin get to work, school, medical appointments, entertainment and anywhere else they need to go. With a dedicated team of 1,000 drivers, mechanics and administrative staff, MCTS provides 17 million rides each year and generates a massive economic impact for the region.

Known around the world for the award-winning MCTS Excellence program, MCTS is proud to offer outstanding customer service and state-of-the-art features including clean-diesel buses and Real-Time tracking information[7].

### FACILITIES OVERVIEW

Milwaukee County Transit System operates 5 energy-consuming facilities, totaling 787,739 sq. ft. throughout the County.

| BUILDING TYPE | # OF BUILDINGS | TOTAL SQ. FT. | BUILDING GROUP AVERAGE EUI | ASHRAE 100 EUI GOAL |
|---|---|---|---|---|
| Vehicle Service | 2 | 470,905 | 100.8 | 57 |
| Vehicle Storage | 2 | 316,770 | 64.0 | 43 |
| Other Service | 1 | 64 | 385.3 | 62 |





### FLEET OVERVIEW

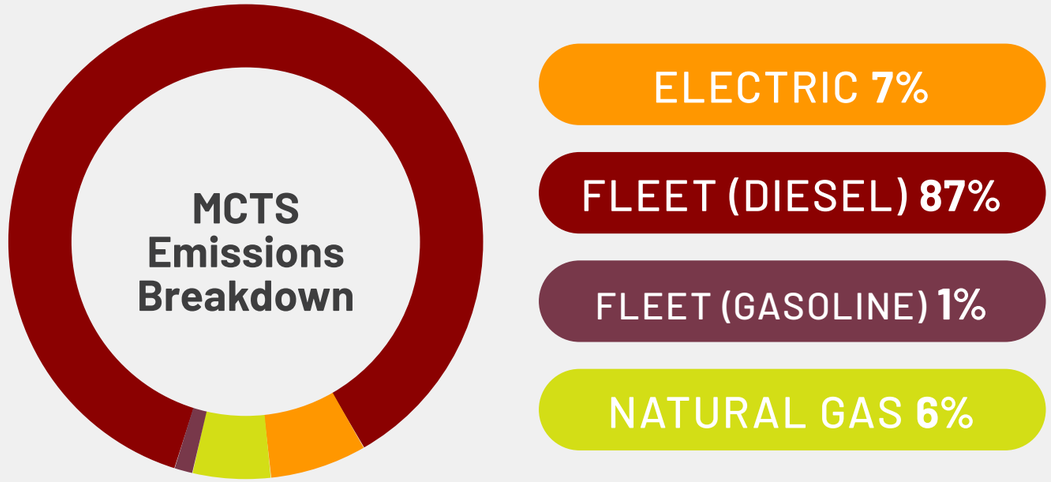
The MCTS fleet includes 387 transit buses, including 15 battery electric buses and the remainder diesel. In 2023, the bus fleet used 3.19 million gallons of fuel to travel 17.7 million miles. Buses are housed at and operate from two bus garages, Fond du Lac Garage and Kinnickinnic (KK) Garage. The KK Garage has been fitted with charging infrastructure for the electric buses.

The MCTS also operates 57 non-revenue vehicles that include a mix of compact SUVs, vans, pickup trucks, and medium duty trucks. The non-revenue fleet supports route supervision, vehicle service, bus shelter maintenance, security, snow removal and other functions. In 2023, MCTS non-revenue vehicles used 26K gallons of fuel to travel approximately 430K miles.

[7]https://www.ridemcts.com/who-we-are

## DEPARTMENT GHG INFORMATION

The Transit System makes up 33% of the overall County emissions.




### Recent Sustainability Initiatives

MCTS has completed several successful sustainability initiatives to decrease their emissions and increase energy efficiency and resiliency.

**Electric Bus Deployment:** MCTS purchased and continues to operate 15 electric transit buses, supported by charging infrastructure at the Kinnickinnic Garage site. Initial rollout of battery electric buses has faced challenges, primarily related to the reliability of the buses, paired with service and support issues from the bus manufacturer who has since withdrawn from the US market.

**Clean Diesel Buses:** Diesel buses operate on ultra-low sulfur diesel fuel as required by EPA standards.

**Light Duty Hybrid Vehicles in Non-Revenue Fleet:** MCTS has operated one hybrid electric vehicle since 2010 for Route Supervision.

**Lighting Upgrades:** Maintenance buildings are mostly high efficiency LED lighting.

**Building Automation:** Centralized building control systems installed.

**High-speed Doors:** Some garage overhead doors upgraded to minimize heating loss.

### Project Development Considerations

Decarbonization projects were developed through a combination of detailed energy and building data analysis as well as collaboration with department staff. The analysis included review of data for utilities (energy), emissions, and the latest Facility Condition Assessment Program (FCAP). Department staff provided further insights regarding past sustainability efforts, potential projects, and cross-departmental engagement opportunities. Additionally, the staff had the opportunity to review and provide feedback on recommended projects and progress milestones.

Note that project types, phasing, savings, and costs are based on the best information currently available. Periodic updates are recommended to keep that plan current and relevant as technology and department operations evolve.

## Overview of Recommended Projects

### TRANSIT FLEET

**ELECTRIFICATION OF NON-REVENUE FLEET:** The Non-Revenue fleet includes 40 vehicles with battery electric vehicle replacement options that have an equal or lower MSRP than gasoline alternatives and a lower total cost of ownership than gasoline alternatives. Any cargo van, SUV, or minivan that is replaced should be replaced with an electric vehicle. This strategy must be executed in conjunction with a multi-year plan for installation of electric vehicle charging at overnight vehicle storage locations, as well as transitory charging at publicly-accessible charging networks or municipal-owned fast charging facilities. MCTS should work closely with MCDOT on electrification of their Non-Revenue fleet, taking advantage of similarities in vehicle types and program needs.

**ELECTRIFICATION OF BUS FLEET:** In spite of the challenges with the initial rollout, battery electric drivetrains remain the most economical and best long-term option to eliminate emissions in the Transit bus fleet. Clean Diesel and Hybrid Electric drivetrain buses can offer improvements in fuel economy and modest reductions in emissions, but do not provide a path to near-zero emissions for MCTS. Demand for battery electric buses remains robust in the US, driven by decarbonization goals of leading transit agencies like MCTS, as well as Federal GHG Emissions Standards for Heavy Duty Vehicles regulations (aka Clean Diesel) regulations and complementary federal incentives. However, the available supply of battery electric buses is limited to just two established OEMs (New Flyer and Gillig) and two start-up OEMs (BYD/Ride and Phoenix/Proterra). As the market for battery electric buses mature, and as other transit agencies continue to operate and provide feedback to OEMs, best practices to improve product quality and manufacturer support are expected to significantly throughout the 2020's. MCTS and the County Board should revisit the electric transit bus market annually to identify the right time to expand their electric bus fleet without expanding service issues or risks related to product quality.

**FLEET ELECTRIFICATION PLANNING:** Recognizing the continued evaluation of electric bus options that will take place over the coming years before expanding electric bus use further, MCTS should partner with departmental stakeholders and external consultants as necessary to update the plan for electrification of the Bus and Non-Revenue fleet on a decade-long horizon, every 2-3 years. Electric vehicles present the opportunity to mitigate emissions and also reduce operating costs for an increasing number of vehicle classes and use cases. However, electric vehicle charging infrastructure requires a multi-year planning timeline to allow for design and construction, potentially including upgrades to electrical services and fire suppression systems where vehicles park indoors. Because the timeline to deploy electric vehicle charging infrastructure is longer than the timeline to procure an electric vehicle, any ambition to deploy electric vehicles without a multi-year plan for charging infrastructure to match is destined to fail.

**ELECTRIC VEHICLE CHARGING INFRASTRUCTURE:** As determined by the Fleet Electrification Planning work, MCTS should pursue the installation of cost-effective overnight charging where possible, as well as transitory charging throughout the county to support on-route charging needs of Transit Buses and Non-Revenue vehicles.

**FUEL SWITCHING FOR REMAINDER OF BUS FLEET:** For those buses that are reliability spares, or whose route dynamics make the use of battery electric buses challenging, MCTS should pursue the use of drop-in replacement fuel R99 in order to mitigate the emission of these vehicles. It is possible that within the next two decades there will be a reliable and cost-effective hydrogen-fueled hybrid electric bus.

## Overview of Recommended Projects

### FACILITIES

**LIGHTING UPGRADES:** Convert all facility and transit stop lighting to LED.

**RETRO-COMMISSIONING:** Optimize energy performance of existing building systems.

**ENERGY EFFICIENCY:** Upgrade facilities to be more efficient. Include additional high-speed overhead doors, HVAC upgrades, and other envelope upgrades.

**BUILDING ELECTRIFICATION:** Eliminate fossil fuel use and replace equipment with electric alternatives. Consider geothermal systems where appropriate.

**ON-SITE SOLAR:** Install PV panels to generate clean electricity.

| STRATEGY | EMISSIONS REDUCTION POTENTIAL | | COST SAVINGS ($/YR) | COST[1] | PAYBACK (YRS) | RESILIENCY IMPACT | PRIORITY BUILDING(S) | NOTES |
|---|---|---|---|---|---|---|---|---|
| | MTCO2e | % | | | | | | |
| **Retro-commissioning** | 350 | 1% | $68,200 | $346,000 | 5.1 | ↑ | Hillside Complex<br>Fond Du Lac Complex<br>KK Transit Complex | All buildings over 10k sq. ft. |
| **Energy Efficiency Upgrades** | 1,230 | 3% | $240,800 | $3,960,000 | 16.4 | ↑ | Hillside Complex | Prioritize lighting |
| **Building Electrification** | 520 | 1% | -$38,000 | $8,980,000 | – | = | Hillside Complex | Required to decarbonize heating |
| **Fleet Upgrades** | 19,670 | 53% | $6,821,031 | $206,300,000 | 30.2 | = | Light Duty Vehicles | Includes conversion to EV and renewable fuels |
| **On-Site Solar** | 550 | 1% | $147,300 | $2,730,000 | 18.5 | ↑ | Hillside Complex | |
| **Off-Site Carbon-Free Energy[2]** | 14,790 | 40% | $0 | $0 | – | = | N/A | |
| **Carbon Offsets** | 220 | 1% | -$4,400 | $0 | – | = | N/A | Annual expense to cover remaining emissions |

*Buildings indicated in orange are located in census tracts where over 20% of the population is living below the federal poverty line.*

[1]Cost estimates are for cost premium for decarbonization beyond BAU; excludes grants and incentives; refer to Appendix A for more details
[2]Cost of CFE is shown as $0 based on the assumption that the utility provider meets their sustainability targets by 2050

## PATHWAY TO 2050 GOAL

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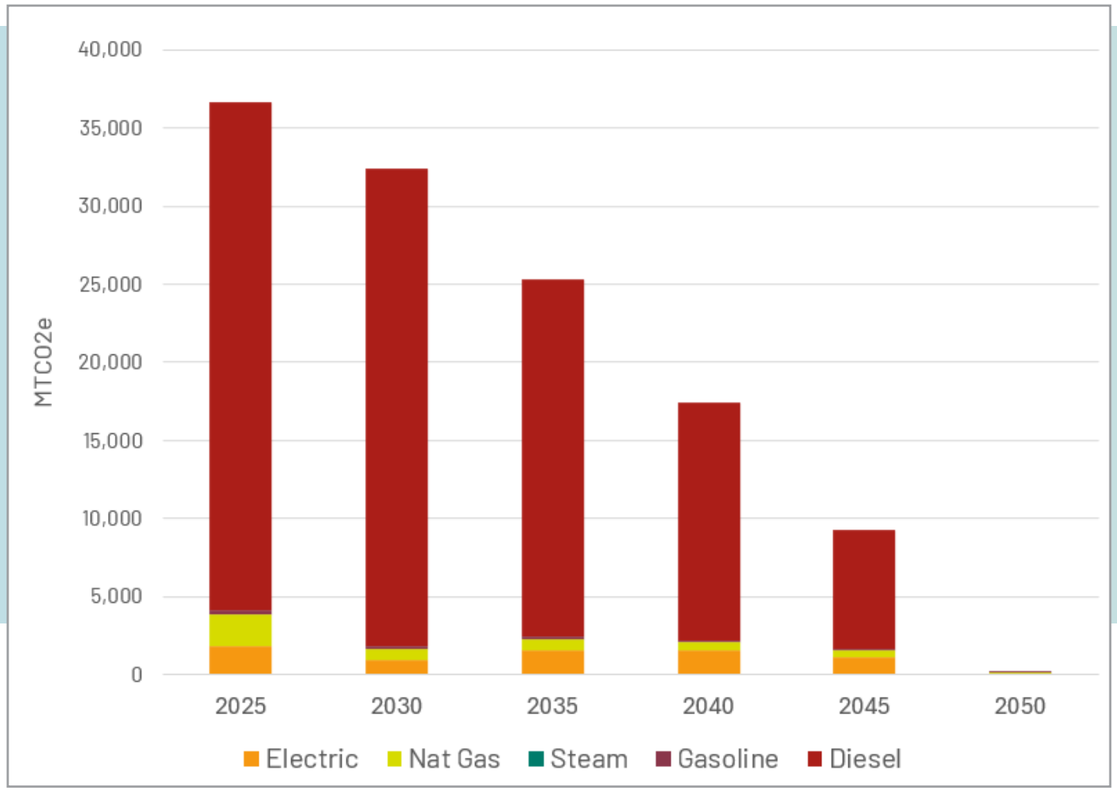
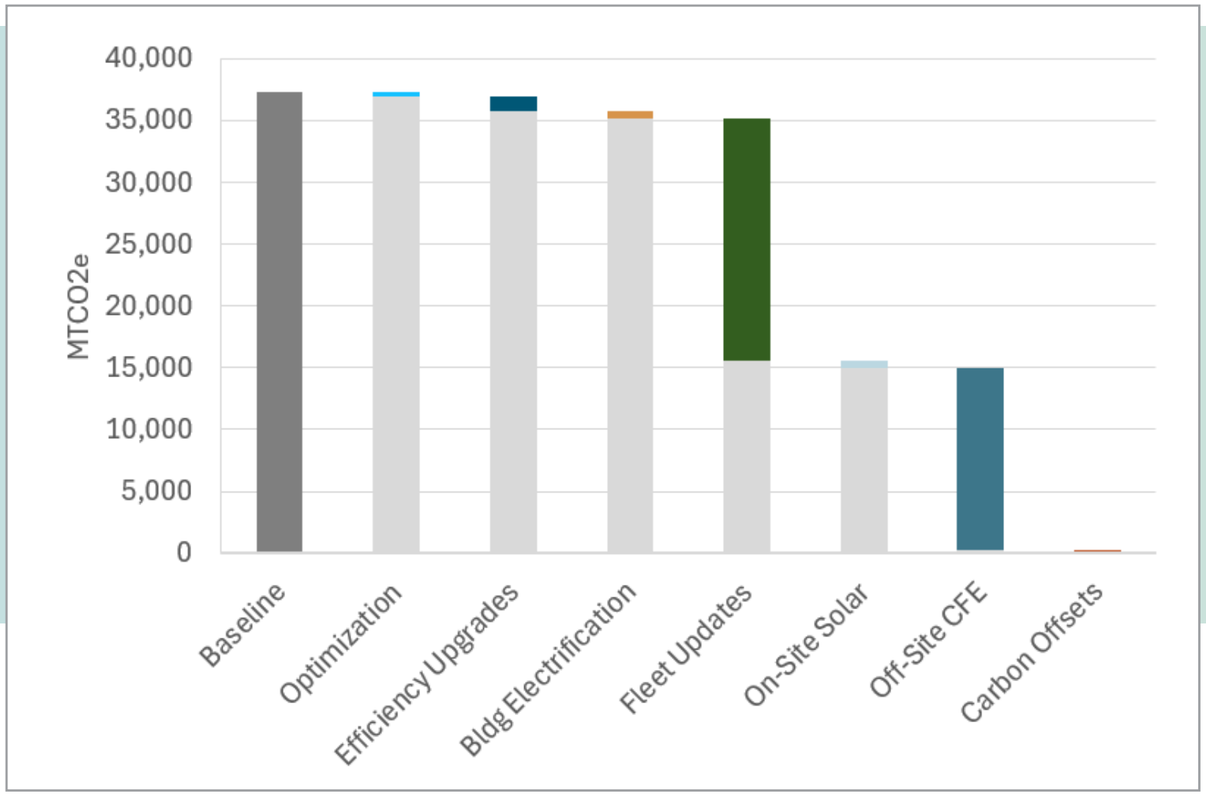



Overall department emissions from 2025 through 2050, including the contribution of each fuel type.

### Emissions Reduction By Project Type




The emissions reduction impact various strategies, listing in order of priority according to the "Impact Hierarchy of Decarbonization" in the "Project Background" section.

## PATHWAY TO 2050 GOAL

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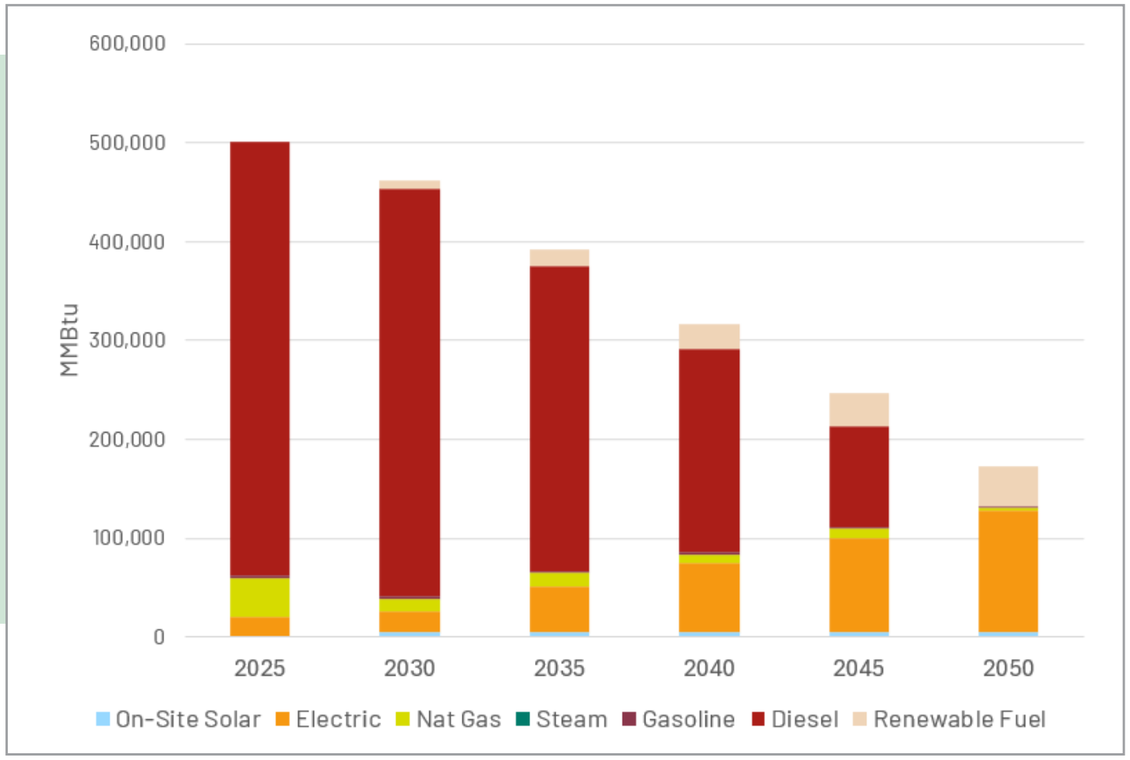
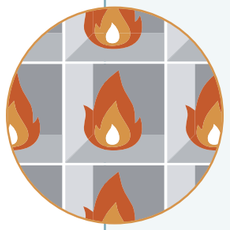



Forecasted energy consumption by fuel type, as well as expected production of on-site solar. The goal is first to minimize total energy demand, and secondly to eliminate fossil fuel consumption and source remaining electric with on-site solar, purchased CFE, and carbon offsets (as required).

## Progress **Milestones**

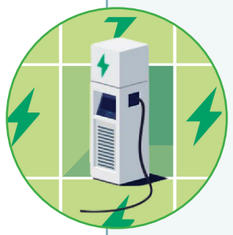


### ENERGY EFFICIENCY

**2028** - RCx buildings over 10k sq. ft.

**2030** - All lighting converted to LED

**2030-2035** - Achieve a department energy reduction of 10% by 2030 and 20% by 2035

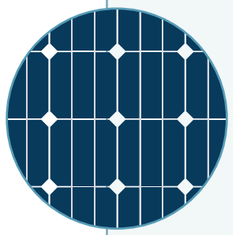


### FLEET UPGRADES

**2027 -** Develop a year-by-year decarbonization plan for individual fleet vehicles

**2030** - Convert at least 15 non-revenue vehicles to electric

**2032** - Re-evaluate electric transit buses in 2030, EV bus pilot



### ON-SITE SOLAR

**2035** - Provide 15% of department electric demand through onsite solar