

District of Columbia

Transportation Electrification Roadmap

Incentives

Webinar will begin shortly...



District of Columbia

Transportation Electrification Roadmap

Incentives

Thursday, 27 May 2021



Welcome – Opening Remarks – Agenda

Agenda Outline

- Welcome
- The District's Clean Energy Plan (Eric Campbell, DOEE)
 - Transportation Electrification Roadmap
- Recapping previous webinars
- Types of Potential Incentives (Will Drier)
- Breakout Discussion
- Report-out/Questions/Feedback/General Discussion

Roadmap - Status

Transportation Electrification Roadmap Final Report due **October 31, 2021**

- ***Receive Stakeholder comments and redraft accordingly***

Introduction and Orientation: Outline of Roadmap Activities

Introduction to Mobility Equity: Introduction to Electric Vehicles and Charging Equipment

Equitable EV Charging Placement: Discussion about desirable locations for EV chargers

Transportation Needs Assessment/Incentives Framework: Discussion about potential incentives for consumers

Recordings of past sessions can be provided.

Schedule of Stakeholder Sessions

- Thur, May 27 | 7pm: Incentives For Businesses, Fleets, Utility and Energy Interests
- Thur, June 24 | 7pm: EV/ EV Service Equipment Strategy
- Thur, July 29 | 7pm: School Bus Electrification
- Thur, August 26 | 7pm: Concluding Roadmap Feedback Group

Register at bit.ly/electrification-roadmap

CLEAN ENERGY DC

THE DISTRICT OF COLUMBIA CLIMATE AND ENERGY PLAN

Transportation Electrification

★ ★ ★ DEPARTMENT
OF ENERGY &
ENVIRONMENT

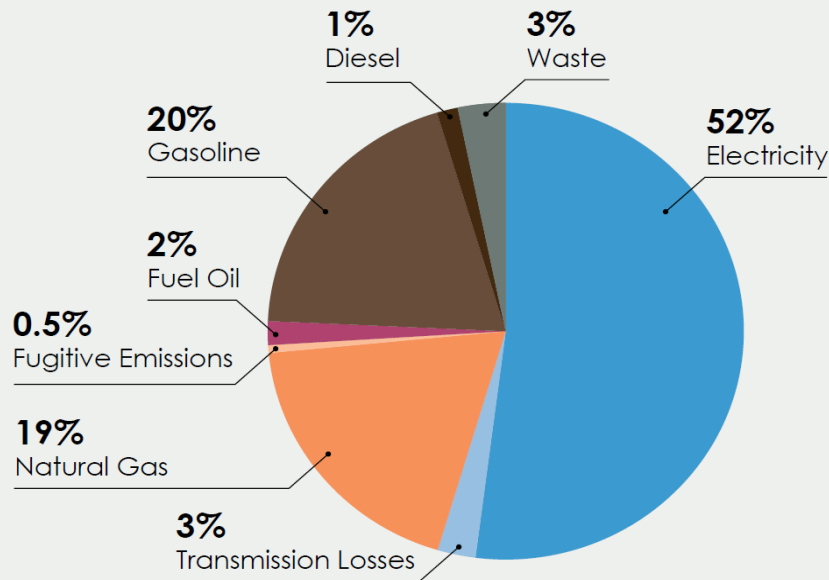
GOVERNMENT OF THE DISTRICT OF COLUMBIA



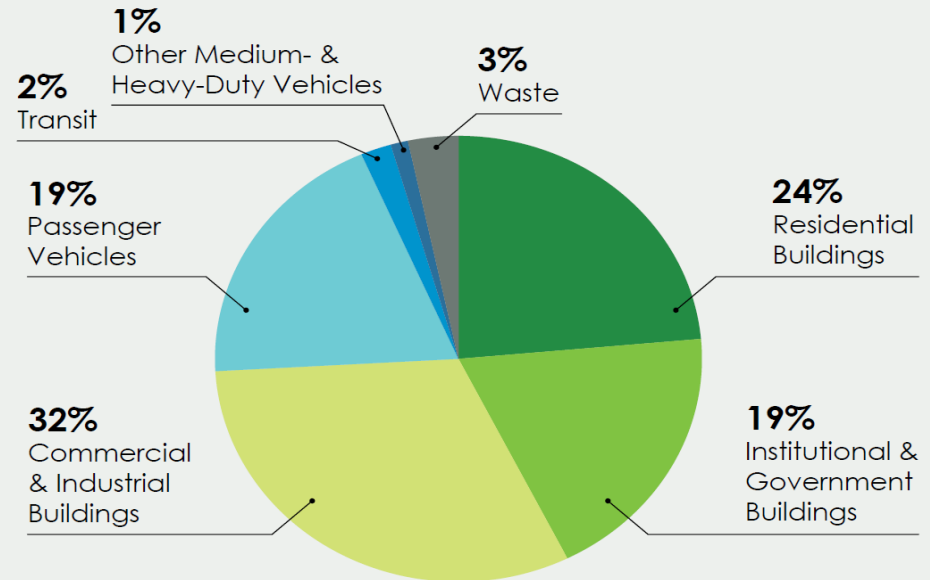
DC CLIMATE AND ENERGY GOALS

Clean Energy DC is the District's first quantified roadmap to meet the Sustainable DC climate and energy goals.

GHG EMISSIONS BY SOURCE



GHG EMISSIONS BY SECTOR

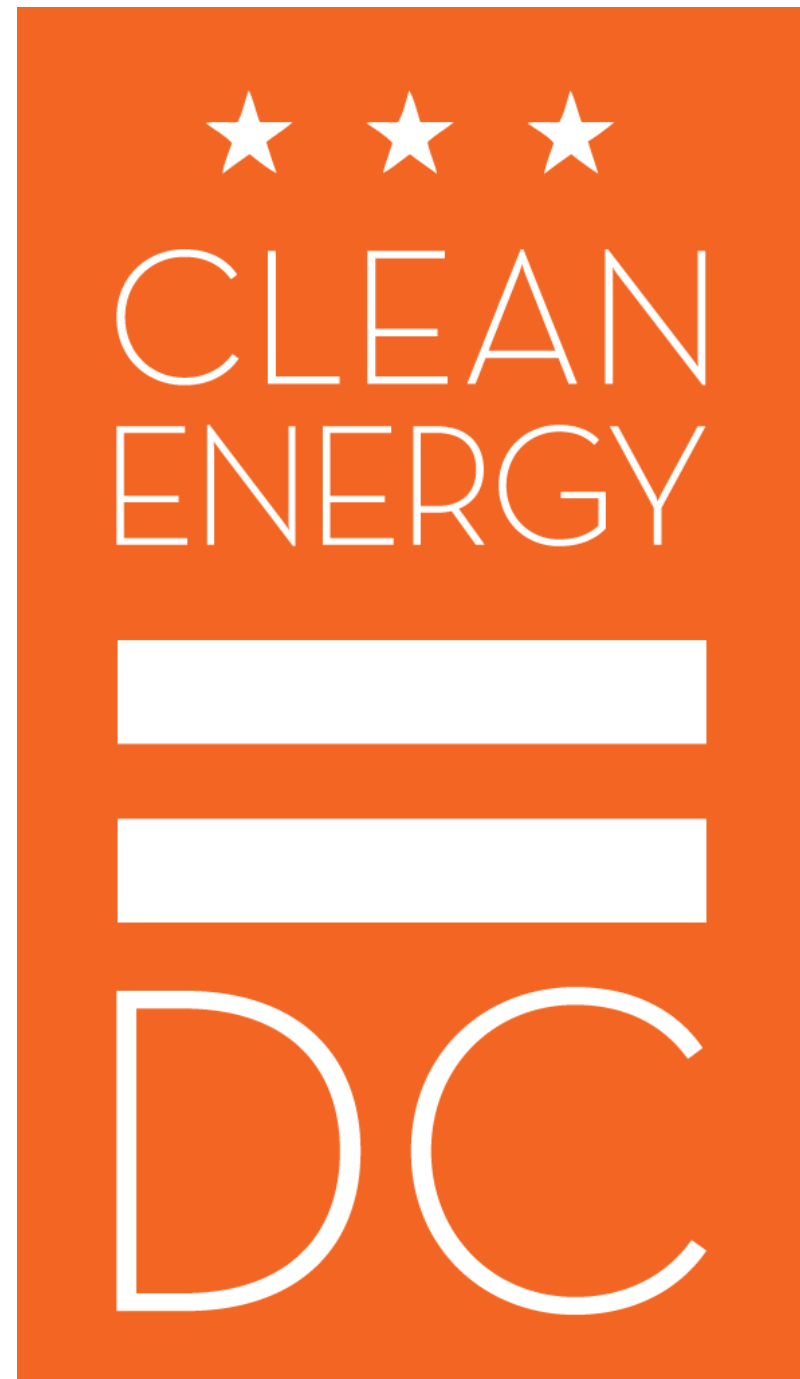


The plan will **reduce emissions by 50 %** by 2032 compared to 2006 levels, and will help the city achieve **carbon neutrality by 2050**

Overview of CEDC Act

The Act, effective as of March 2019, will realize CEDC goals by targeting three areas:

- **Transportation Emissions Reduction and Electrification-** mandates and incentivizes a path for zero-emissions fleets, buses and private vehicles
- **Renewable Energy-** mandates 100% renewable energy by 2032
- **Energy Efficiency-** Establishes a first-of-its kind Building Energy Performance Standard for buildings



Transportation Electrification Roadmap Goals

- 1 Buses and private fleets 50% Low or Zero Emissions Vehicle (ZEV) by 2030 → 100% ZEV by 2045
- 2 100% EV replacement of public buses and school buses at End-Of-Life by 2021
- 3 At least 25% ZEV registrations by 2030 (estimate ~75,000 EVs)

Provide policies, cost estimates, and timelines

Transportation Electrification Roadmap

Transportation Vision:

Mode Shift to
active
transport
and public
transit



Fuel switch to
Electricity



QUESTIONS?



CONTACT INFORMATION

Eric Campbell
Eric.Campbell@dc.gov
202-450-0190

A close-up photograph of a person's hand plugging a white charging cable into the charging port of a light-colored electric vehicle. The hand is wearing a silver bracelet and a ring. The background is blurred, showing a red wall. The text "Potential Incentives" is overlaid in green on the image.

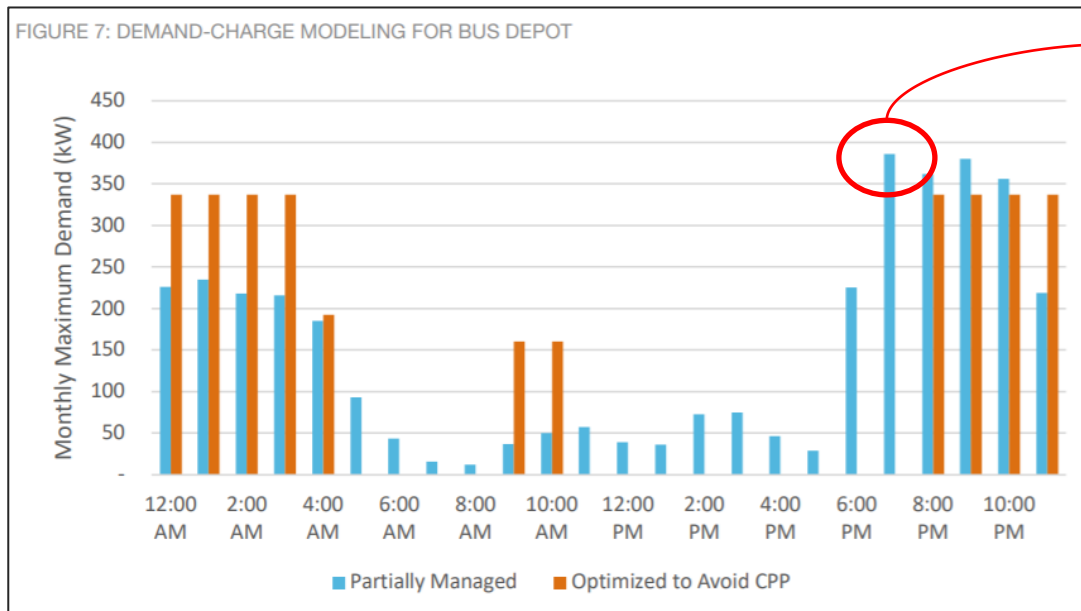
Potential Incentives

Utilities & PSC

- Utility (Pepco)
 - Regulated electricity service provider
 - Can submit TEPs or other rate proposals to PSC to approve new program spending and rate-based cost recovery
- Public Service Commission (DCPSC)
 - Regulates monopoly services to ensure rates are just and reasonable
 - Protects and educates consumers
 - Approves, modifies, or rejects utility proposals and rate structures

Demand Charges

- Demand charges represent a significant cost barrier for fleet electrification
- Based on “peak usage” - highest 15-minute kW average of the month, \$/kW





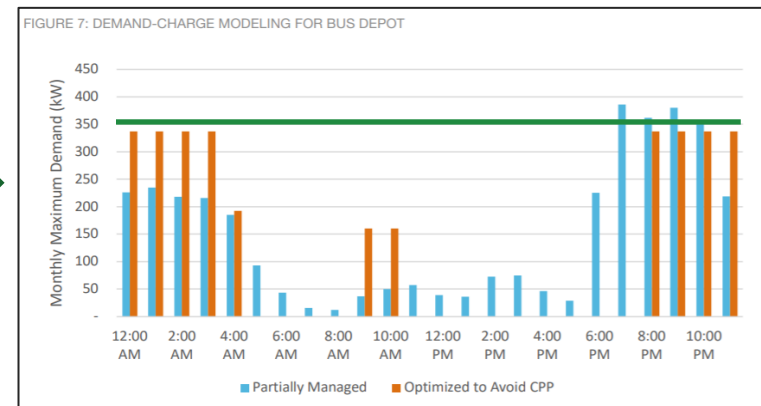
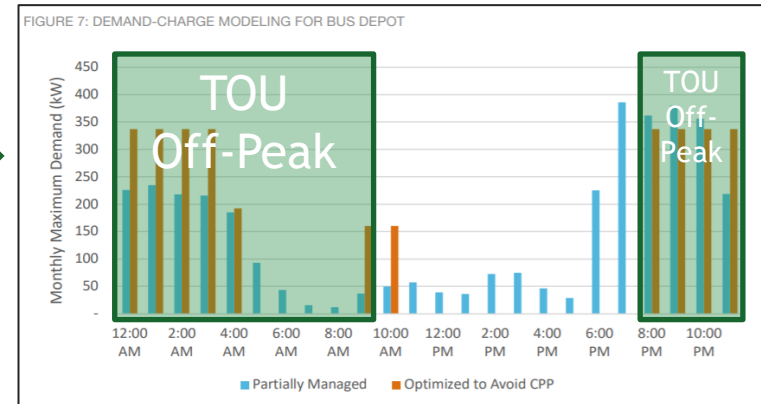
380 kW * \$5.63/kW = \$2,100

Chart Source: RMI

Types of rate structures

Rate structures to incentivize electrification:

- Time of use (TOU) 
 - Price based on time of the day, incentivizes lower cost charging during off-peak hours
- Minimize demand charges
 - Eliminate, minimize, or establish a moratorium on demand charges
- Subscription-based fees 
 - In place of demand charges, a flat fee based on expected peak usage



Shifting Demand Load

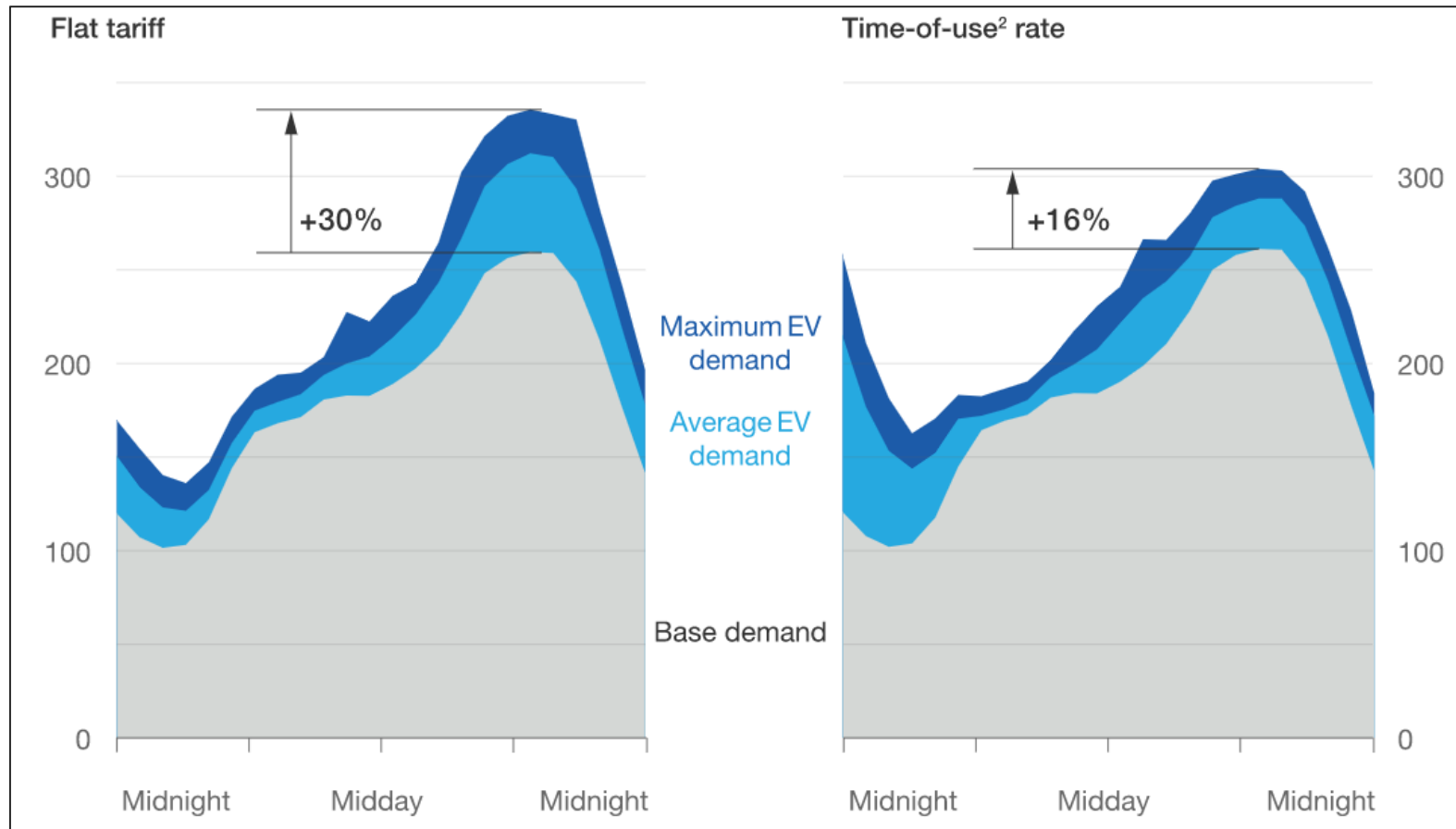


Chart Source: McKinsey & Company

DRVE Tool

DRVE Results Dashboard

This dashboard allows you to explore the results of your analysis by drilling down on the various settings that were input into the tool. Save your results and explore them later by clicking "Save Results".

Nominal Cost Per Mile per Vehicle Use Case

Chart Area

Row Label	Average TCO per Mile	Average
Conventional		
Delivery Truck	\$1.24	\$149,272.38
Pickup Truck	\$0.41	\$46,305.59
Sedan	\$0.39	\$38,952.43
SUV	\$0.40	\$47,915.28
Van	\$0.72	\$75,121.17
Work Truck	\$0.80	\$68,459.76
EV Alternative		
Delivery Truck	\$1.69	\$203,337.04
Pickup Truck	\$0.44	\$47,460.01
Sedan	\$0.35	\$34,293.03
SUV	\$0.35	\$42,592.53
Van	\$1.22	\$128,596.93
Work Truck	\$2.07	\$175,733.85
Grand Total	\$0.59	\$888,888

Fleet Vehicles by Use Case

TCO for EVs by Electricity Cost Scenarios

Vehicle Scenario

Conventional

EV Alternative

Vehicle Class

Medium Duty Vehicle...

Passenger Vehicle (L...

Vehicle Make

Chevrolet

Chrysler

Dodge

Ford

Honda

International

Lightning System

Vehicle Model

6500XD LDF - Box...

Balt EV

Civic 4Dr

Colorado 2WD

E450 Cab & Chassis

Endurance

Explorer AWD

VIN

1FAPP53U05A267100

1FAPP53U05A267101

1FAPP53U05A267102

1FAPP53U05A267103

1FAPP53U05A267104

1FAPP53U05A267105

1FAPP53U05A267106

Likelihood of...

Likely

Unlikely

Very Likely

Very Unlikely

DRVE Tool

Figure 7: Top 5 Passenger Vehicles to Procure

Vehicle Model	Average of Percent Savings from EVs	Vehicles
2020 Chrysler Pacifica Hybrid PHEV	25.46%	13
2020 Chevrolet Bolt EV BEV	15.90%	16
2021 Ford Mustang Mach-E BEV	11.11%	21
2021 Lordstown Endurance BEV	-6.58%	19
Grand Total	10.05%	69

Figure 9: Top 100 Vehicles

VIN	Conventional Vehicle	EV Alternative	Average of Percent Savings from EVs
1FAFP53U05A267107	FORD Taurus	2020 Chevrolet Bolt EV BEV	22.32%
1FAFP53U05A267105	FORD Taurus	2020 Chevrolet Bolt EV BEV	22.32%
1FAFP53U05A267109	FORD Taurus	2020 Chevrolet Bolt EV BEV	22.32%

<https://atlaspolicy.com/rand/dashboard-for-rapid-vehicle-electrification-drve/>

Breakout Groups



Discussion areas:

Input on the barriers to procure EVs and EV charging

Feedback on potential EV/EV charging incentives

Contact Information

Thank you for your participation.

How Can We Improve?

Andrea McCarthy
Program Manager

amccarthy@electrificationcoalition.org

(202) 753-4126



Electrification
Coalition